

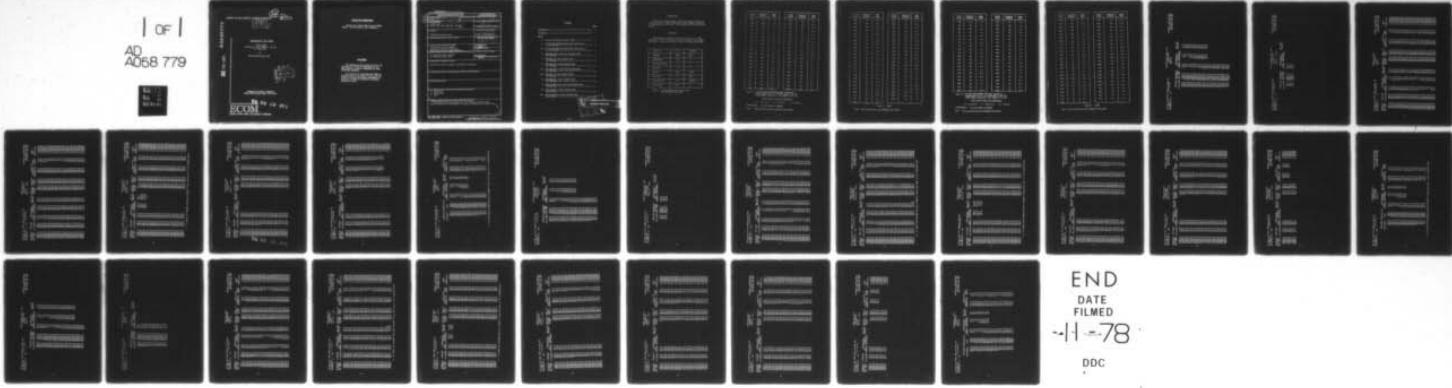
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14822B LANCE MISSILE NUMBER 3329, ROUND NUMBER 314 AST. (U)
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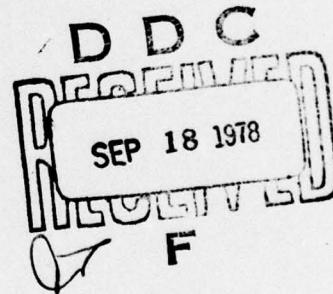
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METEOROLOGICAL DATA REPORT

14822B LANCE
MISSILE NO. 3329, ROUND NO. 314 AST
(14 JUNE 1978)

BY

WSMR METEOROLOGICAL TEAM



ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

78.08.29.071
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UNITED STATES ARMY ELECTRONICS COMMAND

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| 19. KEY WORDS (Continue on reverse side if necessary and identify by block number) 1. Ballistics 2. Meteorology 3. Wind | | | |
| 20. ABSTRACT (Continue on reverse side if necessary and identify by block number) <i>Meteorological data gathered for the launching of 14822B Lance, Missile Number 3329, Round Number 314 AST, are presented in tabular form.</i> | | | |

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INTRODUCTION

14822B Lance, Missile Number 3329, Round Number 314 AST, was launched from LC-39, White Sands Missile Range (WSMR), New Mexico, at 1430 HRS MDT, 14 June 1978. The scheduled launch time was 1430 HRS MDT.

DISCUSSION

Meteorological data were recorded and reduced by the WSMR Meteorological Team, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The data are presented in the following tabulations.

| | | |
|-------------------|---------|-------------------|
| ELEVATION | 4,179.9 | FEET/MSL |
| PRESSURE | 880.0 | MBS |
| TEMPERATURE | 36.7 | °C |
| RELATIVE HUMIDITY | 17 | % |
| DEW POINT | 7.3 | °C |
| DENSITY | 986.5 | GM/M ³ |
| WIND SPEED | 12 | MPH |
| WIND DIRECTION | 210 | DEGREES |
| CLOUD COVER | 1/10 | Cb |

TABLE I. Surface Observations taken at WSD,
1430 HRS MDT/14 June 1978

| HEIGHT (FEET) | DIRECTION (DEGREES) | SPEED (MPH) | HEIGHT (FEET) | DIRECTION (DEGREES) | SPEED (MPH) |
|------------------|------------------------|----------------|------------------|------------------------|----------------|
| SUR | 210 | 4.0 | 2100 | 192 | 15.5 |
| 100 | 195 | 2.5 | 2200 | 192 | 18.0 |
| 200 | 180 | 0.5 | 2300 | 195 | 18.5 |
| 300 | 171 | 0.5 | 2400 | 197 | 18.5 |
| 400 | 162 | 0.5 | 2500 | 194 | 22.0 |
| 500 | 178 | 3.0 | 2600 | 191 | 25.5 |
| 600 | 194 | 5.0 | 2700 | 192 | 21.0 |
| 700 | 195 | 6.0 | 2800 | 193 | 16.5 |
| 800 | 195 | 7.0 | 2900 | 195 | 16.5 |
| 900 | 192 | 8.0 | 3000 | 197 | 16.0 |
| 1000 | 188 | 8.5 | 3100 | 202 | 14.0 |
| 1100 | 190 | 8.5 | 3200 | 207 | 12.0 |
| 1200 | 192 | 8.0 | 3300 | 208 | 11.5 |
| 1300 | 196 | 7.0 | 3400 | 209 | 11.0 |
| 1400 | 199 | 6.0 | 3500 | 203 | 12.5 |
| 1500 | 198 | 8.5 | 3600 | 197 | 13.5 |
| 1600 | 197 | 11.0 | 3700 | 200 | 14.5 |
| 1700 | 193 | 11.0 | 3800 | 202 | 15.5 |
| 1800 | 188 | 11.0 | 3900 | 197 | 16.5 |
| 1900 | 190 | 12.0 | 4000 | 192 | 17.0 |
| 2000 | 191 | 12.5 | 4100 | 190 | 16.0 |

TABLE II. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM LC-39, AT 1420 HRS MDT/14 JUNE 1978
14822B LANCE, MISSILE NO. 3329, ROUND NO. 314 AST

PIBAL RELEASE POINT WSTM COORDINATES:

X = 571,739.24 Y = 362,745.21 Z = 4,126.59

APPROXIMATELY: 3/4 MILE SOUTH OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

| HEIGHT (FEET) | DIRECTION (DEGREES) | SPEED (MPH) | HEIGHT (FEET) | DIRECTION (DEGREES) | SPEED (MPH) |
|------------------|------------------------|----------------|------------------|------------------------|----------------|
| 4200 | 187 | 15.0 | 6700 | 207 | 13.0 |
| 4300 | 188 | 16.0 | 6800 | 213 | 11.0 |
| 4400 | 188 | 17.0 | 6900 | 211 | 11.5 |
| 4500 | 188 | 15.0 | 7000 | 208 | 11.5 |
| 4600 | 187 | 13.0 | 7100 | 205 | 12.0 |
| 4700 | 191 | 13.5 | 7200 | 202 | 12.5 |
| 4800 | 194 | 14.0 | 7300 | 205 | 12.0 |
| 4900 | 192 | 13.5 | 7400 | 207 | 11.0 |
| 5000 | 190 | 13.0 | 7500 | 203 | 12.0 |
| 5100 | 190 | 14.5 | 7600 | 198 | 12.5 |
| 5200 | 190 | 15.5 | 7700 | 198 | 11.5 |
| 5300 | 189 | 14.5 | 7800 | 197 | 10.5 |
| 5400 | 187 | 13.5 | 7900 | 197 | 11.5 |
| 5500 | 191 | 12.0 | 8000 | 196 | 12.0 |
| 5600 | 194 | 10.5 | 8100 | 202 | 10.0 |
| 5700 | 194 | 12.5 | 8200 | 208 | 7.5 |
| 5800 | 194 | 14.0 | 8300 | 220 | 8.5 |
| 5900 | 197 | 12.0 | 8400 | 232 | 9.0 |
| 6000 | 200 | 10.0 | 8500 | 230 | 9.5 |
| 6100 | 202 | 11.0 | 8600 | 227 | 10.0 |
| 6200 | 204 | 11.5 | 8700 | 232 | 9.0 |
| 6300 | 204 | 12.0 | 8800 | 236 | 7.5 |
| 6400 | 204 | 12.0 | 8900 | 242 | 7.0 |
| 6500 | 203 | 13.5 | 9000 | 247 | 6.0 |
| 6600 | 201 | 14.5 | | | |

TABLE II. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

| HEIGHT (FEET) | DIRECTION (DEGREES) | SPEED (MPH) |
|------------------|------------------------|----------------|
| SUR | 210 | 4.0 |
| 100 | 195 | 2.5 |
| 200 | 180 | 0.5 |
| 300 | 182 | 3.0 |
| 400 | 184 | 5.0 |
| 500 | 185 | 6.5 |
| 600 | 185 | 8.0 |
| 700 | 183 | 7.0 |
| 800 | 180 | 6.0 |
| 900 | 194 | 6.0 |
| 1000 | 207 | 5.5 |
| 1100 | 198 | 7.5 |
| 1200 | 189 | 9.0 |
| 1300 | 192 | 9.5 |
| 1400 | 195 | 9.5 |
| 1500 | 196 | 10.0 |
| 1600 | 196 | 10.0 |
| 1700 | 200 | 8.5 |
| 1800 | 204 | 7.0 |
| 1900 | 209 | 7.5 |
| 2000 | 213 | 7.5 |

| HEIGHT (FEET) | DIRECTION (DEGREES) | SPEED (MPH) |
|------------------|------------------------|----------------|
| 2100 | 211 | 6.5 |
| 2200 | 208 | 5.0 |
| 2300 | 208 | 6.5 |
| 2400 | 208 | 8.0 |
| 2500 | 208 | 7.5 |
| 2600 | 207 | 6.5 |
| 2700 | 205 | 7.5 |
| 2800 | 202 | 8.5 |
| 2900 | 203 | 8.5 |
| 3000 | 204 | 8.0 |
| 3100 | 199 | 8.0 |
| 3200 | 193 | 7.5 |
| 3300 | 198 | 8.5 |
| 3400 | 203 | 9.0 |
| 3500 | 200 | 8.0 |
| 3600 | 197 | 6.5 |
| 3700 | 199 | 8.5 |
| 3800 | 201 | 10.5 |
| 3900 | 197 | 11.5 |
| 4000 | 193 | 12.5 |
| 4100 | 194 | 10.5 |

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 2
RELEASED FROM LC-39, AT 1430 HRS MDT/14 JUNE 1978
14822B LANCE, MISSILE NO. 3329, ROUND NO. 314 AST

PIBAL RELEASE POINT WSTM COORDINATES:

X = 571,739.24 Y = 362,745.21 Z = 4,126.59

APPROXIMATELY: 3/4 MILE SOUTH OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

| HEIGHT (FEET) | DIRECTION (DEGREES) | SPEED (MPH) |
|------------------|------------------------|----------------|
| 4200 | 194 | 8.5 |
| 4300 | 196 | 9.0 |
| 4400 | 198 | 9.0 |
| 4500 | 198 | 7.5 |
| 4600 | 198 | 6.0 |
| 4700 | 192 | 7.5 |
| 4800 | 185 | 9.0 |
| 4900 | 185 | 9.0 |
| 5000 | 184 | 9.0 |
| 5100 | 190 | 8.5 |
| 5200 | 196 | 8.0 |
| 5300 | 195 | 8.0 |
| 5400 | 193 | 8.0 |
| 5500 | 190 | 9.0 |
| 5600 | 186 | 9.5 |
| 5700 | 194 | 9.0 |
| 5800 | 202 | 8.5 |
| 5900 | 201 | 9.0 |
| 6000 | 200 | 9.5 |
| 6100 | 197 | 11.0 |
| 6200 | 194 | 12.5 |
| 6300 | 201 | 11.0 |
| 6400 | 207 | 9.5 |
| 6500 | 213 | 10.0 |
| 6600 | 219 | 10.5 |

| HEIGHT (FEET) | DIRECTION (DEGREES) | SPEED (MPH) |
|------------------|------------------------|----------------|
| 6700 | 219 | 11.5 |
| 6800 | 218 | 12.0 |
| 6900 | 226 | 12.5 |
| 7000 | 234 | 12.5 |
| 7100 | 227 | 12.5 |
| 7200 | 220 | 12.5 |
| 7300 | 216 | 14.0 |
| 7400 | 212 | 15.5 |
| 7500 | 213 | 14.5 |
| 7600 | 213 | 13.0 |
| 7700 | 229 | 11.0 |
| 7800 | 244 | 9.0 |
| 7900 | 249 | 9.0 |
| 8000 | 254 | 9.0 |
| 8100 | 237 | 11.0 |
| 8200 | 220 | 12.5 |
| 8300 | 238 | 10.5 |
| 8400 | 255 | 8.0 |
| 8500 | 231 | 9.5 |
| 8600 | 207 | 10.5 |
| 8700 | 221 | 9.0 |
| 8800 | 234 | 7.5 |
| 8900 | 228 | 5.5 |
| 9000 | 221 | 3.5 |

TABLE III. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

STATION ALTITUDE 3997.30 FEET MSL
 14 JUNE 78 1410 HRS MDT
 ASCENSION NO. 73

SIGNIFICANT LEVEL DATA
 1650060073
 S M R
 TABLE IV.

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE DEGREES CENTIGRADE | AIR DEWPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT |
|-----------------------|-----------------------------------|-----------------------------------|---------------------------------------|---------------------|
| 880.8 | 3997.3 | 36.7 | 7.7 | 17.0 |
| 850.0 | 5056.9 | 32.6 | 12.3 | 29.0 |
| 700.0 | 10638.1 | 15.4 | 3.9 | 46.0 |
| 646.6 | 12827.9 | 9.4 | -3.3 | 53.0 |
| 599.0 | 14893.7 | 3.7 | -4.0 | 57.0 |
| 544.8 | 17396.0 | -3.5 | -6.9 | 77.0 |
| 536.0 | 17819.1 | -4.4 | -10.0 | 65.0 |
| 519.2 | 18642.9 | -5.8 | -11.1 | 66.0 |
| 510.1 | 19097.7 | -7.4 | -10.7 | 77.0 |
| 500.0 | 19610.5 | -7.4 | -17.3 | 45.0 |
| 478.8 | 20718.0 | -8.7 | -23.5 | 29.0 |
| 463.2 | 21562.0 | -9.0 | -23.4 | 30.0 |
| 433.4 | 23240.6 | -13.7 | -25.5 | 36.0 |
| 400.0 | 25235.3 | -16.7 | -30.1 | 30.0 |
| 300.0 | 32114.5 | -33.7 | -44.9 | 31.0 |
| 274.4 | 34151.9 | -39.0 | -49.4 | 32.0 |
| 250.0 | 36232.7 | -44.1 | | |
| 234.2 | 37664.5 | -47.6 | | |
| 200.0 | 41054.2 | -53.7 | | |
| 158.8 | 45809.1 | -65.6 | | |
| 150.0 | 46951.2 | -65.8 | | |
| 124.4 | 50666.9 | -69.4 | | |
| 121.2 | 51161.3 | -68.3 | | |
| 115.2 | 52161.6 | -70.2 | | |
| 103.3 | 54314.2 | -71.3 | | |
| 100.0 | 54949.8 | -69.9 | | |
| 89.0 | 57224.7 | -72.5 | | |
| 83.6 | 58451.6 | -68.3 | | |
| 80.8 | 59125.6 | -68.8 | | |
| 70.0 | 61996.4 | -63.7 | | |

STATION ALTITUDE 3997.30 FEET MSL
14 JUNE 78 1410 HRS MDT
ASCENSION NO. 73

SIGNIFICANT LEVEL DATA
1650060073
S M R
TABLE IV. (CONT)

GEODETIC COORDINATES
32°48'03" LAT DEG
106°42'30" LON DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE DEGREES | REL.HUM. PERCENT |
|-----------------------|-----------------------------------|------------------------|---------------------|
| 65.4 | 633d1.7 | -61.2 | |
| 57.8 | 65912.4 | -61.6 | |
| 50.0 | 68906.7 | -57.8 | |
| 42.4 | 72376.4 | -53.7 | |
| 34.0 | 77096.1 | -51.1 | |

STATION ALTITUDE 3997.30 FEET MSL
 14 JUNE 78 1410 HRS MDT
 ASCENSION NO. 73

UPPER AIR DATA
 1650060073
 S M R
 TABLE V.

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | DIRECTION DEGREES(TN) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|------------------|------------------------|----------------------|-----------------------|-----------------------|---------------------|
| 3997.3 | 880.8 | 36.7 | 7.7 | 17.0 | 985.8 | 687.3 | 120.0 | 8.9 |
| 4000.0 | 880.7 | 36.7 | 7.7 | 17.0 | 985.8 | 687.3 | 120.1 | 8.9 |
| 4500.0 | 866.1 | 34.8 | 10.4 | 22.7 | 974.5 | 685.5 | 130.7 | 9.6 |
| 5000.0 | 851.6 | 32.8 | 12.1 | 28.4 | 963.5 | 683.6 | 139.7 | 10.6 |
| 5500.0 | 837.0 | 31.2 | 11.8 | 30.3 | 951.9 | 681.8 | 146.9 | 11.6 |
| 6000.0 | 822.6 | 29.7 | 11.2 | 31.9 | 940.4 | 680.0 | 152.8 | 13.2 |
| 6500.0 | 808.4 | 28.2 | 10.5 | 33.4 | 929.1 | 678.3 | 157.5 | 14.6 |
| 7000.0 | 794.4 | 26.6 | 9.9 | 34.9 | 917.9 | 676.5 | 163.6 | 14.9 |
| 7500.0 | 780.7 | 25.1 | 9.1 | 36.4 | 906.9 | 674.7 | 172.6 | 14.0 |
| 8000.0 | 767.3 | 23.5 | 8.4 | 38.0 | 896.1 | 672.9 | 181.8 | 13.4 |
| 8500.0 | 754.0 | 22.0 | 7.6 | 39.5 | 885.4 | 671.0 | 190.2 | 12.8 |
| 9000.0 | 741.0 | 20.4 | 6.8 | 41.0 | 874.9 | 669.2 | 199.3 | 12.5 |
| 9500.0 | 728.3 | 18.9 | 5.9 | 42.5 | 864.5 | 667.4 | 206.7 | 12.4 |
| 10000.0 | 715.7 | 17.4 | 5.0 | 44.1 | 854.3 | 665.6 | 214.1 | 12.5 |
| 10500.0 | 703.4 | 15.8 | 4.1 | 45.6 | 844.2 | 663.7 | 224.9 | 11.6 |
| 11000.0 | 690.9 | 14.4 | 3.3 | 47.2 | 833.4 | 662.0 | 239.5 | 10.7 |
| 11500.0 | 678.5 | 13.0 | 2.5 | 48.8 | 822.5 | 660.4 | 251.8 | 10.7 |
| 12000.0 | 666.3 | 11.7 | 1.7 | 50.4 | 811.8 | 658.8 | 257.9 | 11.0 |
| 12500.0 | 654.3 | 10.3 | 0.9 | 52.0 | 801.2 | 657.1 | 261.2 | 11.6 |
| 13000.0 | 642.5 | 8.9 | -0 | 53.5 | 790.6 | 655.5 | 257.7 | 12.7 |
| 13500.0 | 630.7 | 7.5 | -1.1 | 54.5 | 780.1 | 653.8 | 256.5 | 13.6 |
| 14000.0 | 619.1 | 6.2 | -2.1 | 55.3 | 769.7 | 652.1 | 258.2 | 14.3 |
| 14500.0 | 607.8 | 4.8 | -3.2 | 56.2 | 759.5 | 650.5 | 261.1 | 15.0 |
| 15000.0 | 596.6 | 3.4 | -4.1 | 57.8 | 749.4 | 646.8 | 265.2 | 15.8 |
| 15500.0 | 585.4 | 2.0 | -4.6 | 61.8 | 739.2 | 647.1 | 268.9 | 16.6 |
| 16000.0 | 574.4 | -5 | -5.1 | 65.8 | 729.2 | 645.4 | 272.5 | 17.3 |
| 16500.0 | 563.6 | -9 | -5.7 | 69.8 | 719.3 | 643.6 | 277.1 | 18.0 |
| 17000.0 | 553.0 | -2.4 | -6.4 | 73.8 | 709.6 | 641.9 | 282.6 | 18.7 |
| 17500.0 | 542.6 | -3.7 | -7.7 | 74.0 | 699.9 | 640.2 | 288.6 | 18.7 |
| 18000.0 | 532.3 | -4.7 | -10.2 | 65.2 | 689.4 | 638.9 | 295.5 | 18.4 |

STATION ALTITUDE 3997.30 FEET MSL
 14 JUNE 78 1410 HRS MDT
 ASCENSION NO. 73

UPPER AIR DATA
 1650060073
 S M R
 TABLE V. (CONT)

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(TN) | WIND SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|------------------|------------------------|----------------------|---------------------------------|------------------|---------------------|
| 16500.0 | 522.1 | -5.6 | -10.9 | 65.8 | 678.4 | 637.9 | 299.3 | 17.3 |
| 19000.0 | 512.0 | -7.1 | -10.8 | 74.6 | 669.0 | 636.1 | 302.4 | 15.9 |
| 19500.0 | 502.2 | -7.4 | -15.6 | 51.9 | 657.4 | 635.5 | 303.2 | 15.0 |
| 20000.0 | 492.4 | -7.9 | -19.2 | 39.4 | 646.0 | 634.9 | 304.0 | 14.1 |
| 20500.0 | 482.9 | -8.4 | -22.1 | 32.1 | 635.0 | 634.1 | 304.8 | 13.1 |
| 21000.0 | 473.5 | -8.8 | -23.4 | 29.3 | 623.6 | 633.6 | 301.8 | 11.4 |
| 21500.0 | 464.3 | -9.0 | -23.4 | 29.9 | 611.9 | 633.4 | 295.8 | 9.6 |
| 22000.0 | 455.2 | -10.2 | -23.9 | 31.6 | 602.7 | 631.9 | 294.0 | 9.1 |
| 22500.0 | 446.3 | -11.6 | -24.5 | 33.4 | 594.1 | 630.2 | 294.5 | 9.0 |
| 23000.0 | 437.6 | -13.0 | -25.2 | 35.1 | 585.6 | 628.5 | 299.0 | 9.5 |
| 23500.0 | 428.9 | -14.1 | -26.1 | 35.2 | 576.4 | 627.2 | 304.1 | 9.1 |
| 24000.0 | 420.4 | -14.8 | -27.2 | 33.7 | 566.6 | 626.3 | 311.2 | 8.1 |
| 24500.0 | 412.0 | -15.6 | -28.4 | 32.2 | 557.0 | 625.4 | 315.5 | 7.6 |
| 25000.0 | 403.8 | -16.3 | -29.6 | 30.7 | 547.5 | 624.5 | 318.1 | 7.4 |
| 25500.0 | 395.6 | -17.4 | -30.7 | 30.0 | 538.5 | 623.2 | 315.3 | 7.5 |
| 26000.0 | 387.4 | -18.6 | -31.8 | 30.1 | 530.0 | 621.7 | 311.0 | 7.7 |
| 26500.0 | 379.4 | -19.8 | -32.8 | 30.2 | 521.5 | 620.2 | 307.1 | 8.3 |
| 27000.0 | 371.5 | -21.1 | -33.9 | 30.3 | 513.3 | 618.7 | 303.7 | 9.0 |
| 27500.0 | 363.9 | -22.3 | -35.0 | 30.3 | 505.1 | 617.1 | 299.1 | 10.1 |
| 28000.0 | 356.3 | -23.5 | -36.0 | 30.4 | 497.1 | 615.6 | 296.4 | 11.6 |
| 28500.0 | 349.0 | -24.8 | -37.1 | 30.5 | 489.3 | 614.1 | 296.2 | 13.5 |
| 29000.0 | 341.7 | -26.0 | -38.2 | 30.5 | 481.6 | 612.5 | 298.6 | 15.4 |
| 29500.0 | 334.7 | -27.2 | -39.3 | 30.6 | 474.0 | 611.0 | 302.0 | 17.3 |
| 30000.0 | 327.7 | -28.5 | -40.3 | 30.7 | 466.5 | 609.4 | 302.8 | 16.3 |
| 30500.0 | 321.0 | -29.7 | -41.4 | 30.8 | 459.2 | 607.9 | 302.7 | 19.0 |
| 31000.0 | 314.3 | -30.9 | -42.5 | 30.8 | 452.0 | 606.3 | 296.4 | 19.4 |
| 31500.0 | 307.8 | -32.2 | -43.6 | 30.9 | 444.9 | 604.8 | 288.8 | 20.1 |
| 32000.0 | 301.4 | -33.4 | -44.6 | 31.0 | 438.0 | 603.2 | 286.2 | 20.9 |
| 32500.0 | 295.0 | -34.7 | -45.7 | 31.2 | 430.9 | 601.6 | 286.3 | 21.7 |
| 33000.0 | 288.6 | -36.0 | -46.8 | 31.4 | 423.9 | 600.0 | 287.7 | 22.6 |

STATION ALTITUDE 3997.30 FEET MSL
 14 JUNE 78 1410 HRS MDT
 ASCENSION NO. 73

UPPER AIR DATA
 1650060073
 S M R
 TABLE V. (CONT)

GEOGRAPHIC COORDINATES
 32°46'03" LAT DEG
 106.42307 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES | JEWPOINT CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SOUND SPEED KNOTS | DIRECTION DEGREES (TN) | MINL DATA SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|-------------------------|---------------------|------------------|------------------------|-------------------|------------------------|-----------------------|---------------------|
| 33500.0 | 282.3 | -37.3 | -47.9 | 31.7 | 417.0 | 598.3 | 291.0 | 23.9 | 1.000093 |
| 34000.0 | 276.2 | -38.6 | -49.0 | 31.9 | 410.2 | 596.7 | 293.4 | 24.9 | 1.000092 |
| 34500.0 | 270.2 | -39.9 | -51.7 | 26.6** | 403.4 | 595.1 | 292.4 | 24.9 | 1.000090 |
| 35000.0 | 264.2 | -41.1 | -55.6 | 19.0** | 396.5 | 593.5 | 291.3 | 24.8 | 1.000089 |
| 35500.0 | 258.3 | -42.3 | -60.7 | 11.3** | 389.8 | 591.9 | 292.2 | 24.4 | 1.000087 |
| 36000.0 | 252.6 | -43.5 | -69.9 | 3.6** | 383.3 | 590.3 | 293.1 | 24.0 | 1.000085 |
| 36500.0 | 247.0 | -44.8 | -44.8 | 376.7 | 588.8 | 293.4 | 24.4 | 1.000084 | |
| 37000.0 | 241.4 | -46.0 | -46.0 | 370.2 | 587.2 | 293.2 | 24.8 | 1.000082 | |
| 37500.0 | 236.0 | -47.2 | -47.2 | 363.6 | 585.6 | 289.9 | 24.8 | 1.000081 | |
| 38000.0 | 230.6 | -48.2 | -48.2 | 357.1 | 584.3 | 286.5 | 25.1 | 1.000080 | |
| 38500.0 | 225.3 | -49.1 | -49.1 | 350.3 | 583.1 | 283.3 | 26.1 | 1.000078 | |
| 39000.0 | 220.1 | -50.0 | -50.0 | 343.6 | 582.0 | 283.1 | 27.0 | 1.000077 | |
| 39500.0 | 215.0 | -50.9 | -50.9 | 337.0 | 580.8 | 283.9 | 27.7 | 1.000075 | |
| 40000.0 | 210.1 | -51.8 | -51.8 | 330.6 | 579.6 | 284.4 | 26.7 | 1.000074 | |
| 40500.0 | 205.2 | -52.7 | -52.7 | 324.3 | 578.4 | 284.8 | 25.6 | 1.000072 | |
| 41000.0 | 200.5 | -53.6 | -53.6 | 318.1 | 577.2 | 284.3 | 24.3 | 1.000071 | |
| 41500.0 | 195.7 | -54.8 | -54.8 | 312.3 | 575.6 | 283.9 | 23.1 | 1.000070 | |
| 42000.0 | 191.0 | -56.1 | -56.1 | 306.6 | 574.0 | 283.4 | 22.9 | 1.000068 | |
| 42500.0 | 186.5 | -57.3 | -57.3 | 300.9 | 572.3 | 282.9 | 22.7 | 1.000067 | |
| 43000.0 | 182.0 | -58.6 | -58.6 | 295.4 | 570.7 | 282.6 | 22.5 | 1.000066 | |
| 43500.0 | 177.6 | -59.8 | -59.8 | 290.1 | 569.0 | 282.7 | 22.3 | 1.000065 | |
| 44000.0 | 173.4 | -61.1 | -61.1 | 284.8 | 567.3 | 282.9 | 22.7 | 1.000063 | |
| 44500.0 | 169.2 | -62.3 | -62.3 | 279.6 | 565.7 | 283.1 | 23.4 | 1.000062 | |
| 45000.0 | 165.2 | -63.6 | -63.6 | 274.5 | 564.0 | 282.9 | 24.8 | 1.000061 | |
| 45500.0 | 161.2 | -64.8 | -64.8 | 269.6 | 562.3 | 282.4 | 27.0 | 1.000060 | |
| 46000.0 | 157.3 | -65.6 | -65.6 | 264.1 | 561.2 | 281.9 | 28.7 | 1.000059 | |
| 46500.0 | 153.4 | -65.7 | -65.7 | 257.7 | 561.1 | 281.2 | 29.3 | 1.000057 | |
| 47000.0 | 149.6 | -65.8 | -65.8 | 251.4 | 560.9 | 280.7 | 29.6 | 1.000056 | |
| 47500.0 | 145.9 | -66.3 | -66.3 | 245.8 | 560.3 | 280.2 | 28.0 | 1.000055 | |
| 48000.0 | 142.3 | -66.8 | -66.8 | 240.2 | 559.6 | 279.6 | 26.6 | 1.000053 | |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3997.30 FEET MSL
14 JUNE 78 1410 HRS MDT
ASCENSION NO. 73

UPPER AIR DATA
1650060073
S M R
TABLE V. (CONT)

GEOGRAPHIC COORDINATES
32.48034 LAT DEG
106.42307 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE | REL. HUM. PERCENT | SOUND METER KNOTS | WIND DATA DIRECTION DEGREES (TN) | SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|-------------------|-------------------|----------------------------------|-------------|---------------------|
| 48500.0 | 138.7 | -67.3 | 234.8 | 558.9 | 278.9 | 25.6 | 1.000052 |
| 49000.0 | 135.3 | -67.8 | 229.5 | 558.3 | 278.2 | 24.4 | 1.000051 |
| 49500.0 | 131.9 | -68.3 | 224.3 | 557.6 | 276.9 | 21.2 | 1.000050 |
| 50000.0 | 128.6 | -68.8 | 219.3 | 557.0 | 275.2 | 18.0 | 1.000049 |
| 50500.0 | 125.4 | -69.2 | 214.3 | 556.3 | 272.5 | 13.7 | 1.000048 |
| 51000.0 | 122.3 | -68.7 | 208.4 | 557.1 | 267.1 | 9.3 | 1.000046 |
| 51500.0 | 119.0 | -68.9 | 203.4 | 556.8 | 260.4 | 6.8 | 1.000045 |
| 52000.0 | 116.3 | -69.9 | 199.2 | 555.5 | 256.5 | 5.9 | 1.000044 |
| 52500.0 | 113.3 | -70.4 | 194.7 | 554.8 | 252.1 | 5.4 | 1.000043 |
| 53000.0 | 110.5 | -70.6 | 190.0 | 554.4 | 249.5 | 5.6 | 1.000042 |
| 53500.0 | 107.7 | -70.9 | 185.5 | 554.1 | 245.7 | 6.0 | 1.000041 |
| 54000.0 | 105.0 | -71.1 | 181.0 | 553.7 | 237.3 | 7.2 | 1.000040 |
| 54500.0 | 102.3 | -70.9 | 176.2 | 554.1 | 231.1 | 6.6 | 1.000039 |
| 55000.0 | 99.7 | -70.0 | 171.0 | 555.3 | 218.3 | 11.1 | 1.000038 |
| 55500.0 | 97.2 | -70.5 | 167.1 | 554.5 | 210.5 | 13.9 | 1.000037 |
| 56000.0 | 94.8 | -71.1 | 163.4 | 553.8 | 203.3 | 16.2 | 1.000036 |
| 56500.0 | 92.4 | -71.7 | 159.7 | 553.0 | 196.8 | 18.4 | 1.000036 |
| 57000.0 | 90.0 | -72.2 | 156.1 | 552.2 | 192.6 | 19.3 | 1.000035 |
| 57500.0 | 87.8 | -71.6 | 151.7 | 553.1 | 191.2 | 16.2 | 1.000034 |
| 58000.0 | 85.5 | -69.8 | 146.6 | 555.5 | 189.1 | 13.1 | 1.000033 |
| 58500.0 | 83.4 | -68.3 | 141.8 | 557.5 | 181.1 | 9.5 | 1.000032 |
| 59000.0 | 81.3 | -68.7 | 138.6 | 557.0 | 163.6 | 6.3 | 1.000031 |
| 59500.0 | 79.3 | -68.1 | 134.8 | 557.8 | 157.8 | 4.7 | 1.000030 |
| 60000.0 | 77.3 | -67.2 | 130.9 | 559.0 | 167.6 | 3.8 | 1.000029 |
| 60500.0 | 75.4 | -66.4 | 127.1 | 560.2 | 170.6 | 3.3 | 1.000028 |
| 61000.0 | 73.6 | -65.5 | 123.4 | 561.4 | 152.3 | 3.6 | 1.000027 |
| 61500.0 | 71.8 | -64.6 | 119.9 | 562.6 | 138.0 | 4.2 | 1.000027 |
| 62000.0 | 70.0 | -63.7 | 116.4 | 563.8 | 122.2 | 7.3 | 1.000026 |
| 62500.0 | 68.3 | -62.8 | 113.1 | 565.0 | 115.9 | 10.5 | 1.000025 |
| 63000.0 | 66.6 | -61.9 | 109.9 | 566.2 | 115.5 | 12.3 | 1.000024 |

78 08 29 071

STATION ALTITUDE 3997.30 FEET MSL
 14 JUNE 78 1410 HRS MDT
 ASCENSION NO. 73

UPPER AIR DATA
 1650060073
 S M R
 TABLE V. (CONT)

GEOGRAPHIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES (TN) | SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|------------------|------------------------|----------------------|----------------------------------|-------------|---------------------|
| 63500.0 | 65.0 | -61.2 | 106.9 | 567.1 | 116.9 | 13.2 | 1.000024 | |
| 64000.0 | 63.5 | -61.3 | 104.3 | 567.0 | 116.5 | 14.5 | 1.000023 | |
| 64500.0 | 61.9 | -61.4 | 101.9 | 566.9 | 113.0 | 16.4 | 1.000023 | |
| 65000.0 | 60.4 | -61.5 | 99.4 | 566.8 | 110.2 | 18.4 | 1.000022 | |
| 65500.0 | 59.0 | -61.5 | 97.1 | 566.7 | 110.3 | 18.7 | 1.000022 | |
| 66000.0 | 57.6 | -61.5 | 94.7 | 566.8 | 110.5 | 18.9 | 1.000021 | |
| 66500.0 | 56.2 | -60.9 | 92.2 | 567.6 | 108.1 | 19.4 | 1.000021 | |
| 67000.0 | 54.8 | -60.2 | 89.7 | 568.5 | 103.7 | 20.4 | 1.000020 | |
| 67500.0 | 53.5 | -59.6 | 87.3 | 569.3 | 99.3 | 21.6 | 1.000019 | |
| 68000.0 | 52.2 | -59.0 | 85.0 | 570.2 | 93.1 | 23.6 | 1.000019 | |
| 68500.0 | 51.0 | -58.3 | 82.7 | 571.0 | 87.6 | 25.8 | 1.000018 | |
| 69000.0 | 49.8 | -57.7 | 80.5 | 571.8 | 87.6 | 26.2 | 1.000018 | |
| 69500.0 | 48.6 | -57.1 | 78.4 | 572.6 | 89.2 | 25.9 | 1.000017 | |
| 70000.0 | 47.5 | -56.5 | 76.3 | 573.4 | 90.7 | 26.2 | 1.000017 | |
| 70500.0 | 46.4 | -55.9 | 74.3 | 574.2 | 92.0 | 29.0 | 1.000017 | |
| 71000.0 | 45.3 | -55.3 | 72.4 | 575.0 | 93.1 | 31.9 | 1.000016 | |
| 71500.0 | 44.2 | -54.7 | 70.5 | 575.8 | 92.8 | 27.9 | 1.000016 | |
| 72000.0 | 43.2 | -54.1 | 68.7 | 576.5 | 91.0 | 19.4 | 1.000015 | |
| 72500.0 | 42.2 | -53.6 | 66.9 | 577.2 | 86.4 | 10.9 | 1.000015 | |
| 73000.0 | 41.2 | -53.4 | 65.3 | 577.6 | 66.9 | 5.7 | 1.000015 | |
| 73500.0 | 40.2 | -53.1 | 63.7 | 577.9 | 352.6 | 3.8 | 1.000014 | |
| 74000.0 | 39.3 | -52.8 | 62.1 | 578.3 | 352.0 | 3.8 | 1.000014 | |
| 74500.0 | 38.4 | -52.5 | 60.6 | 578.7 | 83.5 | 9.3 | 1.000014 | |
| 75000.0 | 37.5 | -52.3 | 59.1 | 579.0 | 95.0 | 19.0 | 1.000013 | |
| 75500.0 | 36.6 | -52.0 | 57.7 | 579.4 | | | 1.000013 | |
| 76000.0 | 35.8 | -51.7 | 56.3 | 579.7 | | | 1.000013 | |
| 76500.0 | 35.0 | -51.4 | 54.9 | 580.1 | | | 1.000012 | |
| 77000.0 | 34.2 | -51.2 | 53.6 | 580.5 | | | 1.000012 | |

STATION ALTITUDE 3997.30 FEET MSL
 14 JUNE 78 1410 HRS MDT
 ASCENSION NO. 73

MANDATORY LEVELS
 1650060073
 S M R
 TABLE VI.

GEODETIC COORDINATES
 32.48034 LAT DEG
 106.42307 LON DEG

| PRESSURE MILLIBARS | GEOPOTENTIAL FEET | TEMPERATURE DEGREES | REL. HUM. PERCENT | WIND DATA | |
|-----------------------|----------------------|------------------------|----------------------|----------------------------|------------------------------------|
| | | | | AIR DE-POINT CENTIGRADE | DIRECTION DEGREES (TN) KNOTS |
| 850.0 | 5053. | 32.6 | 12.3 | 29. | 140.5 10.8 |
| 800.0 | 6830. | 27.2 | 10.1 | 34. | 160.8 15.3 |
| 750.0 | 8685. | 21.5 | 7.3 | 40. | 193.6 12.6 |
| 700.0 | 10627. | 15.4 | 3.9 | 46. | 228.5 11.3 |
| 650.0 | 12671. | 9.8 | .6 | 53. | 259.9 12.0 |
| 600.0 | 14831. | 3.8 | -3.9 | 57. | 263.9 15.5 |
| 550.0 | 17126. | -2.8 | -6.6 | 75. | 284.0 18.9 |
| 500.0 | 19582. | -7.4 | -17.3 | 45. | 303.4 14.8 |
| 450.0 | 22261. | -11.0 | -24.2 | 33. | 292.9 6.9 |
| 400.0 | 25193. | -16.7 | -30.1 | 30. | 317.8 7.4 |
| 350.0 | 28434. | -24.6 | -37.0 | 30. | 296.2 13.4 |
| 300.0 | 32049. | -33.7 | -44.9 | 31. | 286.2 21.1 |
| 250.0 | 36152. | -44.1 | | | 293.3 24.2 |
| 200.0 | 40954. | -53.7 | | | 284.3 24.2 |
| 175.0 | 43725. | -60.6 | | | 282.8 22.5 |
| 150.0 | 46823. | -65.8 | | | 280.7 29.8 |
| 125.0 | 50425. | -69.3 | | | 272.1 13.3 |
| 100.0 | 54778. | -69.9 | | | 219.9 10.6 |
| 80.0 | 59125. | -68.4 | | | 154.8 5.1 |
| 70.0 | 61782. | -63.7 | | | 122.9 7.0 |
| 60.0 | 64913. | -61.5 | | | 110.0 16.6 |
| 50.0 | 66646. | -57.8 | | | 87.4 26.3 |
| 40.0 | 73321. | -53.0 | | | 340.7 4.2 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL
14 JUNE 78 1420 HRS MDT
ASCENSION NO. 368

SIGNIFICANT LEVEL DATA
1650020366
WHITE SANDS
TABLE VII.

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE AIR DEGREES | DEWPOINT CENTIGRADE | REL. HUM. PERCENT |
|-----------------------|-----------------------------------|-------------------------------|------------------------|----------------------|
| 881.0 | 3989.0 | 36.7 | 7.7 | 17.0 |
| 850.0 | 5053.3 | 31.7 | 9.8 | 26.0 |
| 759.4 | 6322.3 | 22.0 | 5.0 | 33.0 |
| 700.0 | 10618.0 | 15.1 | 2.0 | 41.0 |
| 632.4 | 13410.0 | 7.6 | -1.7 | 51.0 |
| 611.4 | 14321.3 | 4.9 | -5.2 | 48.0 |
| 570.0 | 16185.3 | -4 | -6.6 | 63.0 |
| 553.0 | 16960.4 | -1.6 | -8.3 | 61.0 |
| 525.2 | 18319.8 | -6.4 | -10.1 | 75.0 |
| 500.0 | 19561.3 | -8.1 | -16.2 | 52.0 |
| 479.2 | 20664.2 | -9.6 | -23.2 | 32.0 |
| 471.6 | 21071.5 | -8.1 | -27.0 | 20.0 |
| 441.0 | 22771.7 | -12.4 | -28.3 | 25.0 |
| 400.0 | 25209.2 | -15.7 | -34.0 | 19.0 |
| 397.4 | 25370.8 | -16.4 | -34.6 | 19.0 |
| 336.8 | 29361.5 | -27.1 | -43.1 | 20.0 |
| 300.0 | 32090.9 | -33.6 | -48.7 | 20.0 |
| 250.0 | 36212.6 | -44.0 | | |
| 200.0 | 41042.7 | -53.7 | | |
| 160.0 | 45555.3 | -64.1 | | |
| 150.0 | 46957.6 | -64.5 | | |
| 134.0 | 49209.6 | -68.4 | | |
| 120.0 | 51392.4 | -68.4 | | |
| 104.0 | 54208.6 | -70.6 | | |
| 100.0 | 54980.2 | -68.6 | | |
| 89.0 | 57271.5 | -70.9 | | |
| 86.2 | 57901.3 | -67.8 | | |
| 75.0 | 60665.0 | -67.8 | | |
| 70.0 | 62046.9 | -64.3 | | |
| 64.2 | 63809.6 | -60.6 | | |

STATION ALTITUDE 3989.00 FEET MSL
14 JUNE 78 1420 HRS MDT
ASCENSION NO. 368

SIGNIFICANT LEVEL DATA
1650020368
WHITE SANDS
TABLE VII. (CONT)

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE AIR DEWPOINT DEGREES CENTIGRADE | REL. HUM. PERCENT |
|-----------------------|-----------------------------------|---|----------------------|
| 61.6 | 64657.7 | -61.6 | |
| 50.0 | 68972.1 | -57.3 | |
| 38.4 | 74553.2 | -52.2 | |
| 30.0 | 79871.0 | -49.3 | |
| 26.2 | 82960.3 | -26.2 | |

STATION ALTITUDE 3989.00 FEET MSL
 14 JUNE 78 1420 HRS MDT
 ASCENSION NO. 368

UPPER AIR DATA
 1650020366
 WHITE SANDS
 TABLE VIII.

GEODETIC COORDINATES
 32°40.043 LAT DEG
 106.37033 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | DIRECTION DEGREES (TN) | WIND SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|-------------------|------------------------|----------------------|------------------------|------------------|---------------------|
| 3989.0 | 881.0 | 36.7 | 7.7 | 17.0 | 986.0 | 687.3 | 180.0 | 1.000261 |
| 4000.0 | 880.7 | 36.6 | 7.7 | 17.1 | 985.8 | 687.3 | 180.4 | 1.000261 |
| 4500.0 | 866.0 | 34.3 | 9.1 | 21.3 | 976.3 | 684.8 | 196.9 | 1.000264 |
| 5000.0 | 851.5 | 32.0 | 9.8 | 25.5 | 967.0 | 682.3 | 207.7 | 1.000265 |
| 5500.0 | 837.0 | 30.4 | 9.5 | 27.0 | 955.6 | 680.5 | 214.9 | 1.000261 |
| 6000.0 | 822.7 | 28.9 | 8.6 | 28.0 | 944.0 | 678.8 | 209.2 | 1.000257 |
| 6500.0 | 808.6 | 27.4 | 7.9 | 29.1 | 932.6 | 677.1 | 197.5 | 12.7 |
| 7000.0 | 794.8 | 25.9 | 7.1 | 30.2 | 921.4 | 675.4 | 193.6 | 14.0 |
| 7500.0 | 781.2 | 24.4 | 6.3 | 31.2 | 910.3 | 673.6 | 190.3 | 15.4 |
| 8000.0 | 767.9 | 23.0 | 5.5 | 32.3 | 899.4 | 671.9 | 194.1 | 14.4 |
| 8500.0 | 754.6 | 21.5 | 4.8 | 33.6 | 888.6 | 670.1 | 198.8 | 13.4 |
| 9000.0 | 741.4 | 20.0 | 4.2 | 35.4 | 877.4 | 668.4 | 203.5 | 12.1 |
| 9500.0 | 728.3 | 18.5 | 3.6 | 37.1 | 866.5 | 666.6 | 208.9 | 10.7 |
| 10000.0 | 715.5 | 17.0 | 2.9 | 38.8 | 855.8 | 664.9 | 214.6 | 9.4 |
| 10500.0 | 702.9 | 15.5 | 2.1 | 40.6 | 845.2 | 663.1 | 221.0 | 8.3 |
| 11000.0 | 690.3 | 14.1 | 1.5 | 42.4 | 834.1 | 661.5 | 231.3 | 7.1 |
| 11500.0 | 677.9 | 12.8 | 0.9 | 44.2 | 822.9 | 660.0 | 247.4 | 6.1 |
| 12000.0 | 665.7 | 11.5 | 0.3 | 45.9 | 811.8 | 658.4 | 259.8 | 6.5 |
| 12500.0 | 653.7 | 10.2 | -1.4 | 47.7 | 801.0 | 656.9 | 264.1 | 7.6 |
| 13000.0 | 641.9 | 8.9 | -1.1 | 49.5 | 790.3 | 655.3 | 268.2 | 9.3 |
| 13500.0 | 630.3 | 7.5 | -2.0 | 50.7 | 779.9 | 653.7 | 272.4 | 10.8 |
| 14000.0 | 618.7 | 5.9 | -3.9 | 49.1 | 770.2 | 651.7 | 275.4 | 12.4 |
| 14500.0 | 607.3 | 4.4 | -5.2 | 49.4 | 760.3 | 649.9 | 276.3 | 13.3 |
| 15000.0 | 596.0 | 3.0 | -5.5 | 53.5 | 750.0 | 648.2 | 277.0 | 14.1 |
| 15500.0 | 584.9 | 1.5 | -5.9 | 57.5 | 739.9 | 646.5 | 278.5 | 14.5 |
| 16000.0 | 574.0 | 1 | -6.4 | 61.5 | 729.9 | 644.8 | 281.0 | 14.4 |
| 16500.0 | 563.2 | -1.0 | -7.3 | 62.2 | 719.1 | 643.5 | 283.5 | 14.4 |
| 17000.0 | 552.6 | -1.9 | -8.5 | 61.2 | 708.0 | 642.4 | 285.6 | 14.9 |
| 17500.0 | 542.0 | -3.6 | -8.9 | 66.4 | 699.0 | 640.3 | 287.4 | 15.6 |
| 18000.0 | 531.7 | -5.3 | -9.6 | 71.7 | 690.1 | 638.3 | 290.1 | 16.0 |

STATION ALTITUDE 3989.00 FEET MSL
14 JUNE 78 1420 HRS MDT
ASCENSION NO. 368

UPPER AIR DATA
1650020368
WHITE SANDS
TABLE VIII. (CONT)

GEOGRAPHIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE ^c AIR DEPOINT DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES (TN) | SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|---|-------------------|------------------------|----------------------|----------------------------------|-------------|---------------------|
| 18500.0 | 521.5 | -6.6 | -10.9 | 71.7 | 680.4 | 636.6 | 292.8 | 16.3 |
| 19000.0 | 511.5 | -7.3 | -13.2 | 62.6 | 669.2 | 635.7 | 296.2 | 15.3 |
| 19500.0 | 501.6 | -8.0 | -15.7 | 53.5 | 658.1 | 634.8 | 300.4 | 13.9 |
| 20000.0 | 491.9 | -8.7 | -18.6 | 44.3 | 647.2 | 633.9 | 300.9 | 12.5 |
| 20500.0 | 482.3 | -9.4 | -21.9 | 35.0 | 636.4 | 633.0 | 299.5 | 11.1 |
| 21000.0 | 472.9 | -8.4 | -26.2 | 22.1 | 621.8 | 634.1 | 299.9 | 10.5 |
| 21500.0 | 463.7 | -9.2 | -27.3 | 21.3 | 611.6 | 633.1 | 301.2 | 10.3 |
| 22000.0 | 454.6 | -10.4 | -27.6 | 22.7 | 602.6 | 631.6 | 305.0 | 10.0 |
| 22500.0 | 445.8 | -11.7 | -28.1 | 24.2 | 593.7 | 630.1 | 310.9 | 9.7 |
| 23000.0 | 437.0 | -12.7 | -28.8 | 24.4 | 584.2 | 628.9 | 314.9 | 9.5 |
| 23500.0 | 428.3 | -13.4 | -29.9 | 23.2 | 574.2 | 628.0 | 316.4 | 9.4 |
| 24000.0 | 419.8 | -14.1 | -31.1 | 22.0 | 564.3 | 627.2 | 318.0 | 9.2 |
| 24500.0 | 411.5 | -14.7 | -32.3 | 20.7 | 554.6 | 626.4 | 316.3 | 8.9 |
| 25000.0 | 403.4 | -15.4 | -33.5 | 19.5 | 545.0 | 625.5 | 314.1 | 8.5 |
| 25500.0 | 395.3 | -16.7 | -34.8 | 19.0 | 536.9 | 623.9 | 312.2 | 8.5 |
| 26000.0 | 387.2 | -18.1 | -35.9 | 19.2 | 528.7 | 622.3 | 311.2 | 9.0 |
| 26500.0 | 379.3 | -19.4 | -36.9 | 19.3 | 520.6 | 620.6 | 310.2 | 9.5 |
| 27000.0 | 371.6 | -20.7 | -38.0 | 19.4 | 512.7 | 619.0 | 306.0 | 10.7 |
| 27500.0 | 364.0 | -22.1 | -39.1 | 19.5 | 504.9 | 617.4 | 302.1 | 12.2 |
| 28000.0 | 356.6 | -23.4 | -40.2 | 19.7 | 497.3 | 615.7 | 299.7 | 13.7 |
| 28500.0 | 349.3 | -24.7 | -41.2 | 19.8 | 489.7 | 614.1 | 299.6 | 15.5 |
| 29000.0 | 342.1 | -26.1 | -42.3 | 19.9 | 482.3 | 612.4 | 299.5 | 17.3 |
| 29500.0 | 335.1 | -27.4 | -43.4 | 20.0 | 474.9 | 610.8 | 301.3 | 17.9 |
| 30000.0 | 328.0 | -28.6 | -44.4 | 20.0 | 467.2 | 609.3 | 303.7 | 18.2 |
| 30500.0 | 321.1 | -29.8 | -45.4 | 20.0 | 459.6 | 607.8 | 304.1 | 18.0 |
| 31000.0 | 314.3 | -31.0 | -46.4 | 20.0 | 452.1 | 606.3 | 301.8 | 17.4 |
| 31500.0 | 307.7 | -32.2 | -47.5 | 20.0 | 444.7 | 604.8 | 299.0 | 17.1 |
| 32000.0 | 301.2 | -33.4 | -48.5 | 20.0 | 437.5 | 603.3 | 294.7 | 19.0 |
| 32500.0 | 294.6 | -34.6 | -50.5 | 18.0** | 430.3 | 601.7 | 291.2 | 20.9 |
| 33000.0 | 288.2 | -35.9 | -52.8 | 15.6** | 423.1 | 600.1 | 290.1 | 22.4 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL
14 JUNE 78 1420 HRS MDT
ASCENSION NO. 368

UPPER AIR DATA
1650020366
WHITE SANDS
TABLE VIII. (CONT.)

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(TN) | SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|------------------|------------------------|----------------------|---------------------------------|-------------|---------------------|
| 33500.0 | 281.9 | -37.2 | -55.2 | 416.1 | 598.5 | 290.9 | 23.3 | 1.000093 |
| 34000.0 | 275.7 | -38.4 | -57.9 | 409.2 | 596.9 | 291.7 | 24.2 | 1.000091 |
| 34500.0 | 269.7 | -39.7 | -60.8 | 402.4 | 595.3 | 292.9 | 24.0 | 1.000090 |
| 35000.0 | 263.6 | -40.9 | -64.4 | 5.9** | 395.7 | 294.2 | 23.7 | 1.000088 |
| 35500.0 | 258.0 | -42.2 | -69.1 | 3.5** | 389.2 | 592.0 | 294.5 | 1.000087 |
| 36000.0 | 252.4 | -43.5 | -77.9 | 1.0** | 382.6 | 590.4 | 291.1 | 1.000085 |
| 36500.0 | 246.7 | -44.6 | | | 376.0 | 589.0 | 287.6 | 23.5 |
| 37000.0 | 241.1 | -45.6 | | | 369.0 | 587.7 | 284.5 | 23.7 |
| 37500.0 | 235.6 | -46.6 | | | 362.2 | 586.4 | 281.7 | 23.9 |
| 38000.0 | 230.2 | -47.6 | | | 355.5 | 585.1 | 279.0 | 24.1 |
| 38500.0 | 224.9 | -48.6 | | | 348.9 | 583.8 | 280.3 | 24.8 |
| 39000.0 | 219.8 | -49.6 | | | 342.5 | 582.5 | 281.7 | 25.5 |
| 39500.0 | 214.8 | -50.6 | | | 336.2 | 581.2 | 282.6 | 25.8 |
| 40000.0 | 209.9 | -51.6 | | | 330.0 | 579.9 | 282.8 | 25.4 |
| 40500.0 | 205.1 | -52.6 | | | 323.9 | 578.5 | 283.0 | 25.0 |
| 41000.0 | 200.4 | -53.6 | | | 318.0 | 577.2 | 283.1 | 24.1 |
| 41500.0 | 195.6 | -54.6 | | | 312.0 | 575.7 | 283.2 | 23.0 |
| 42000.0 | 191.0 | -55.9 | | | 306.2 | 574.2 | 283.2 | 22.1 |
| 42500.0 | 186.4 | -57.1 | | | 300.5 | 572.7 | 283.3 | 22.4 |
| 43000.0 | 181.9 | -58.2 | | | 294.9 | 571.2 | 283.4 | 22.6 |
| 43500.0 | 177.6 | -59.4 | | | 289.4 | 569.6 | 281.2 | 24.4 |
| 44000.0 | 173.4 | -60.5 | | | 284.0 | 568.1 | 278.9 | 26.3 |
| 44500.0 | 169.2 | -61.7 | | | 278.7 | 566.5 | 278.1 | 27.9 |
| 45000.0 | 165.2 | -62.8 | | | 273.6 | 565.0 | 278.6 | 28.9 |
| 45500.0 | 161.2 | -64.0 | | | 268.5 | 563.4 | 279.0 | 29.9 |
| 46000.0 | 157.3 | -64.2 | | | 262.3 | 563.1 | 279.6 | 28.8 |
| 46500.0 | 153.4 | -64.4 | | | 256.0 | 562.9 | 280.2 | 27.8 |
| 47000.0 | 149.7 | -64.6 | | | 250.0 | 562.6 | 279.6 | 26.9 |
| 47500.0 | 146.0 | -65.4 | | | 244.8 | 561.5 | 278.0 | 25.9 |
| 48000.0 | 142.4 | -66.3 | | | 239.6 | 560.3 | 276.3 | 25.0 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL
 14 JUNE 78 1420 HRS MDT
 ASCENSION NO. 368

UPPER AIR DATA
 1650020368
 WHITE SANDS
 TABLE VIII. (CONT.)

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREES | DEWPOINT DEGREES | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | DIRECTION DEGREES(TN) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|-------------------------|------------------|------------------|------------------------|----------------------|-----------------------|-----------------------|---------------------|
| 48500.0 | 138.8 | -67.2 | | 234.8 | 559.1 | 275.7 | 24.2 | 1.000052 | |
| 49000.0 | 135.4 | -68.0 | | 230.0 | 557.9 | 275.0 | 23.3 | 1.000051 | |
| 49500.0 | 132.0 | -68.4 | | 224.7 | 557.5 | 274.4 | 21.3 | 1.000050 | |
| 50000.0 | 128.6 | -68.4 | | 219.1 | 557.5 | 273.7 | 17.9 | 1.000049 | |
| 50500.0 | 125.5 | -68.4 | | 213.6 | 557.5 | 272.6 | 14.4 | 1.000048 | |
| 51000.0 | 122.4 | -68.4 | | 208.3 | 557.5 | 269.9 | 10.0 | 1.000046 | |
| 51500.0 | 119.3 | -68.5 | | 203.1 | 557.3 | 262.3 | 5.5 | 1.000045 | |
| 52000.0 | 116.4 | -68.9 | | 198.4 | 556.8 | 242.6 | 2.6 | 1.000044 | |
| 52500.0 | 113.4 | -69.3 | | 193.8 | 556.3 | 193.7 | 1.5 | 1.000043 | |
| 53000.0 | 110.6 | -69.7 | | 189.3 | 555.7 | 154.0 | 1.9 | 1.000042 | |
| 53500.0 | 107.8 | -70.0 | | 184.9 | 555.2 | 182.0 | 1.8 | 1.000041 | |
| 54000.0 | 105.1 | -70.4 | | 180.6 | 554.7 | 205.1 | 2.3 | 1.000040 | |
| 54500.0 | 102.5 | -69.8 | | 175.6 | 555.5 | 206.4 | 5.5 | 1.000039 | |
| 55000.0 | 99.9 | -68.6 | | 170.2 | 557.2 | 206.7 | 8.7 | 1.000038 | |
| 55500.0 | 97.4 | -69.1 | | 166.3 | 556.5 | 203.7 | 11.6 | 1.000037 | |
| 56000.0 | 94.9 | -69.6 | | 162.5 | 555.8 | 198.6 | 14.1 | 1.000036 | |
| 56500.0 | 92.6 | -70.1 | | 158.8 | 555.1 | 195.1 | 16.8 | 1.000035 | |
| 57000.0 | 90.2 | -70.6 | | 155.2 | 554.4 | 195.2 | 15.8 | 1.000035 | |
| 57500.0 | 88.0 | -69.8 | | 150.7 | 555.6 | 196.3 | 13.8 | 1.000034 | |
| 58000.0 | 85.8 | -67.8 | | 145.5 | 558.3 | 197.3 | 11.3 | 1.000032 | |
| 58500.0 | 83.6 | -67.8 | | 141.9 | 556.3 | 197.3 | 7.3 | 1.000032 | |
| 59000.0 | 81.6 | -67.8 | | 138.4 | 556.3 | 197.2 | 3.4 | 1.000031 | |
| 59500.0 | 79.5 | -67.8 | | 134.9 | 558.3 | 171.6 | 2.5 | 1.000030 | |
| 60000.0 | 77.6 | -67.8 | | 131.6 | 558.3 | 143.3 | 3.0 | 1.000029 | |
| 60500.0 | 75.6 | -67.8 | | 128.3 | 558.3 | 130.3 | 4.0 | 1.000029 | |
| 61000.0 | 73.8 | -67.0 | | 124.6 | 559.4 | 128.4 | 5.3 | 1.000028 | |
| 61500.0 | 71.9 | -65.7 | | 120.8 | 561.1 | 127.2 | 6.6 | 1.000027 | |
| 62000.0 | 70.2 | -64.4 | | 117.1 | 562.8 | 115.6 | 8.8 | 1.000026 | |
| 62500.0 | 68.5 | -63.3 | | 113.7 | 564.3 | 108.4 | 11.3 | 1.000025 | |
| 63000.0 | 66.8 | -62.3 | | 110.4 | 565.7 | 105.9 | 13.1 | 1.000025 | |

STATION ALTITUDE 3989.00 FEET MSL
 14 JUNE 78 1420 HRS MDT
 ASCENSION NO. 368

UPPER AIR DATA
 1650020368
 WHITE SANDS
 TABLE VIII. (CONT)

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(TN) | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|-------------------|------------------------|----------------------|---------------------------------|---------------------|
| 63500.0 | 65.2 | -61.2 | 107.2 | 567.1 | 106.4 | 14.2 | 1.000024 |
| 64000.0 | 63.6 | -60.8 | 104.4 | 567.7 | 106.8 | 15.3 | 1.000023 |
| 64500.0 | 62.1 | -61.4 | 102.1 | 566.9 | 108.3 | 15.1 | 1.000023 |
| 65000.0 | 60.6 | -61.3 | 99.6 | 567.1 | 109.9 | 14.7 | 1.000022 |
| 65500.0 | 59.1 | -60.8 | 97.0 | 567.8 | 110.5 | 14.9 | 1.000022 |
| 66000.0 | 57.7 | -60.3 | 94.5 | 568.4 | 109.7 | 15.9 | 1.000021 |
| 66500.0 | 56.3 | -59.8 | 92.0 | 569.1 | 109.0 | 16.9 | 1.000020 |
| 67000.0 | 55.0 | -59.3 | 89.6 | 569.8 | 105.6 | 17.8 | 1.000020 |
| 67500.0 | 53.7 | -58.8 | 87.2 | 570.4 | 101.9 | 18.8 | 1.000019 |
| 68000.0 | 52.4 | -58.3 | 85.0 | 571.1 | 99.1 | 19.6 | 1.000019 |
| 68500.0 | 51.2 | -57.8 | 82.7 | 571.7 | 98.4 | 19.3 | 1.000018 |
| 69000.0 | 49.9 | -57.3 | 80.6 | 572.4 | 97.7 | 19.0 | 1.000018 |
| 69500.0 | 48.8 | -56.8 | 78.5 | 573.0 | 98.2 | 18.5 | 1.000017 |
| 70000.0 | 47.6 | -56.4 | 76.5 | 573.6 | 99.3 | 17.8 | 1.000017 |
| 70500.0 | 46.5 | -55.9 | 74.6 | 574.2 | 100.5 | 17.2 | 1.000017 |
| 71000.0 | 45.4 | -55.4 | 72.7 | 574.8 | 96.0 | 16.6 | 1.000016 |
| 71500.0 | 44.4 | -55.0 | 70.8 | 575.4 | 90.7 | 16.2 | 1.000016 |
| 72000.0 | 43.3 | -54.5 | 69.0 | 576.0 | 85.8 | 16.0 | 1.000015 |
| 72500.0 | 42.3 | -54.1 | 67.3 | 576.6 | 84.0 | 16.3 | 1.000015 |
| 73000.0 | 41.3 | -53.6 | 65.6 | 577.2 | 82.2 | 16.6 | 1.000015 |
| 73500.0 | 40.4 | -53.2 | 63.9 | 577.8 | 83.3 | 17.0 | 1.000014 |
| 74000.0 | 39.4 | -52.7 | 62.3 | 578.4 | 88.3 | 17.6 | 1.000014 |
| 74500.0 | 38.5 | -52.2 | 60.7 | 579.0 | 93.0 | 18.4 | 1.000014 |
| 75000.0 | 37.6 | -52.0 | 59.2 | 579.4 | 97.2 | 18.9 | 1.000013 |
| 75500.0 | 36.7 | -51.7 | 57.8 | 579.8 | 101.2 | 19.2 | 1.000013 |
| 76000.0 | 35.9 | -51.4 | 56.4 | 580.1 | 105.1 | 19.7 | 1.000013 |
| 76500.0 | 35.1 | -51.1 | 55.0 | 580.5 | 107.0 | 20.3 | 1.000012 |
| 77000.0 | 34.3 | -50.9 | 53.7 | 580.8 | 108.4 | 20.8 | 1.000012 |
| 77500.0 | 33.5 | -50.6 | 52.4 | 581.2 | 109.7 | 21.4 | 1.000012 |
| 78000.0 | 32.7 | -50.3 | 51.2 | 581.5 | 109.7 | 21.6 | 1.000011 |

STATION ALTITUDE 3989.00 FEET MSL
 14 JUNE 78 1420 HRS MDT
 ASCENSION NO. 368

UPPER AIR DATA
 1650020366
 WHITE SANDS
 TABLE VIII. (CONT)

GEODETIC COORDINATES
 32.40043 LAT DEG
 106.37033 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA | | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|------------------|------------------------|----------------------|-----------------------|-------------|---------------------|
| | | | | | | DIRECTION DEGREES(TN) | SPEED KNOTS | |
| 78500.0 | 32.0 | -50.0 | 49.9 | 581.9 | 109.4 | 21.7 | 1.000011 | |
| 79000.0 | 31.2 | -49.8 | 48.7 | 582.3 | 109.0 | 21.7 | 1.000011 | |
| 79500.0 | 30.5 | -49.5 | 47.5 | 582.6 | 109.3 | 22.0 | 1.000011 | |
| 80000.0 | 29.8 | -48.3 | 46.2 | 584.1 | 109.8 | 22.3 | 1.000010 | |
| 80500.0 | 29.2 | -44.6 | 44.5 | 589.0 | 110.3 | 22.7 | 1.000010 | |
| 81000.0 | 28.6 | -40.9 | 42.6 | 593.8 | | | 1.000010 | |
| 81500.0 | 27.9 | -37.1 | 41.2 | 598.5 | | | 1.000009 | |
| 82000.0 | 27.3 | -33.4 | 39.7 | 603.2 | | | 1.000009 | |
| 82500.0 | 26.7 | -29.6 | 38.2 | 607.9 | | | 1.000009 | |

STATION ALTITUDE 3989.00 FEET MSL
 14 JUNE 78 1420 HRS MDT
 ASCENSION NO. 368

MANDATORY LEVELS
 1650020368
 WHITE SANDS
 TABLE IX.

GEODETIC COORDINATES
 32°40043 LAT DEG
 106°37033 LON DEG

| PRESSURE MILLIBARS | GEOPOTENTIAL FEET | AIR DEGREES | TEMPERATURE DEGREES CENTIGRADE | DEPOINT PERCENT | REL.HUM. PERCENT | WIND DATA | |
|-----------------------|----------------------|----------------|--------------------------------------|--------------------|---------------------|--------------------------|----------------|
| | | | | | | DIRECTION DEGREES(TN) | SPEED KNOTS |
| 850.0 | 5050. | 31.7 | 9.8 | 26. | 208.6 | 9.3 | |
| 800.0 | 6819. | 26.5 | 7.4 | 30. | 194.9 | 13.6 | |
| 750.0 | 8669. | 20.9 | 4.6 | 34. | 200.6 | 13.0 | |
| 700.0 | 10607. | 15.1 | 2.0 | 41. | 222.7 | 8.1 | |
| 650.0 | 12649. | 9.8 | -6 | 48. | 265.2 | 8.2 | |
| 600.0 | 14807. | 3.5 | -5.4 | 52. | 276.7 | 13.8 | |
| 550.0 | 17100. | -2.3 | -8.5 | 62. | 286.0 | 15.1 | |
| 500.0 | 19553. | -8.1 | -16.2 | 52. | 301.1 | 13.7 | |
| 450.0 | 22228. | -11.1 | -27.6 | 23. | 307.9 | 9.8 | |
| 400.0 | 25166. | -15.7 | -34.0 | 19. | 313.2 | 6.4 | |
| 350.0 | 28412. | -24.6 | -41.1 | 20. | 299.6 | 15.5 | |
| 300.0 | 32026. | -33.6 | -48.7 | 20. | 294.1 | 19.2 | |
| 250.0 | 36132. | -44.0 | | | 289.7 | 23.5 | |
| 200.0 | 40942. | -53.7 | | | 283.1 | 24.1 | |
| 175.0 | 43717. | -60.1 | | | 279.7 | 25.6 | |
| 150.0 | 46829. | -64.5 | | | 279.8 | 27.0 | |
| 125.0 | 50437. | -68.4 | | | 272.6 | 14.0 | |
| 100.0 | 54808. | -68.6 | | | 206.7 | 8.4 | |
| 80.0 | 59185. | -67.8 | | | 181.1 | 2.5 | |
| 70.0 | 61832. | -64.3 | | | 115.3 | 8.9 | |
| 60.0 | 64961. | -61.1 | | | 110.4 | 14.6 | |
| 50.0 | 68710. | -57.3 | | | 97.8 | 19.1 | |
| 40.0 | 73385. | -53.0 | | | 84.8 | 17.2 | |
| 30.0 | 79527. | -49.3 | | | 109.6 | 22.2 | |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3951.40 FEET MSL
 14 JUNE 78 1420 HRS MDT
 ASCENSION NO. 66

SIGNIFICANT LEVEL DATA
 1650050066
 APACHE
 TABLE X.

GEOODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 LON DEG

| PRESSURE MILLIBARS | GEOMETRIC ALTITUDE MSL FEET | TEMPERATURE AIR DEGREES CENTIGRADE | DEWPOINT CENTIGRADE | REL. HUM. PERCENT |
|-----------------------|-----------------------------------|---|------------------------|----------------------|
| 882.2 | 3951.4 | 35.2 | 6.5 | 17.0 |
| 878.9 | 4062.3 | 31.6 | 4.4 | 18.0 |
| 850.0 | 5042.6 | 29.3 | 6.7 | 24.0 |
| 782.4 | 7434.7 | 22.0 | 4.1 | 31.0 |
| 758.6 | 8312.3 | 20.0 | 2.8 | 32.0 |
| 700.0 | 10563.6 | 13.6 | 0.6 | 41.0 |
| 668.4 | 11834.7 | 9.9 | -0.0 | 50.0 |
| 638.0 | 13097.4 | 5.5 | -1.0 | 63.0 |
| 628.6 | 13496.0 | 4.2 | -1.4 | 67.0 |
| 599.2 | 14772.4 | 1.4 | -4.4 | 95.0 |
| 581.4 | 15568.8 | -0.6 | -6.1 | 66.0 |
| 564.2 | 16356.0 | -2.5 | -9.4 | 59.0 |
| 538.8 | 17532.8 | -5.1 | -14.6 | 47.0 |
| 530.4 | 17957.9 | -6.6 | -16.0 | 47.0 |
| 520.2 | 18457.0 | -6.6 | -15.0 | 51.0 |
| 500.0 | 19469.7 | -9.5 | -15.2 | 63.0 |
| 488.4 | 20064.6 | -11.3 | -17.9 | 58.0 |
| 471.0 | 20979.4 | -11.9 | -29.7 | 21.0 |
| 463.4 | 21389.0 | -11.9 | -27.9 | 25.0 |
| 426.4 | 23466.9 | -16.3 | -29.8 | 30.0 |
| 412.2 | 24305.3 | -16.5 | -31.4 | 25.0 |
| 400.0 | 25045.9 | -18.4 | -34.3 | 23.0 |
| 311.4 | 31003.2 | -34.4 | -46.8 | 27.0 |
| 300.0 | 31858.9 | -36.1 | -48.9 | 25.0 |
| 263.8 | 34748.9 | -44.2 | | |
| 250.0 | 35930.5 | -46.2 | | |
| 238.0 | 37000.5 | -49.2 | | |
| 228.2 | 37906.7 | -50.4 | | |
| 200.0 | 40709.1 | -55.6 | | |
| 161.6 | 45075.6 | -66.4 | | |

STATION ALTITUDE 3951.40 FEET MSL
14 JUNE 76 1420 HRS MDT
ASCENSION 1.0. 66

SIGNIFICANT LEVEL DATA
1650050066
APACHE
TABLE X. (CONT.)

GEODETIC COORDINATES
32.62700 LAT DEG
106.39352 LON DEG

| PRESSURE MILLIBARS | GEOMETRIC MSL FEET | TEMPERATURE DEGREES | REL. HUM. PERCENT |
|-----------------------|-----------------------|------------------------|----------------------|
| 150.0 | 46556.7 | -68.1 | |
| 142.6 | 47553.7 | -70.1 | |
| 131.8 | 49096.5 | -70.6 | |
| 126.4 | 49608.0 | -70.5 | |
| 125.2 | 50103.3 | -69.5 | |
| 115.6 | 51630.3 | -71.8 | |
| 103.4 | 53835.6 | -71.5 | |
| 100.0 | 54486.7 | -71.8 | |
| 91.6 | 56146.4 | -73.1 | |
| 72.6 | 60749.6 | -67.4 | |
| 70.0 | 61479.0 | -65.3 | |
| 67.2 | 62305.4 | -62.4 | |
| 50.0 | 68365.1 | -58.8 | |
| 30.6 | 78744.8 | -51.7 | |
| 30.0 | 79170.6 | -50.7 | |
| 25.6 | 82566.1 | -51.1 | |
| 20.0 | 87945.0 | -47.3 | |
| 15.3 | 93850.3 | -44.4 | |
| 12.2 | 98916.8 | -40.7 | |

STATION ALTITUDE 3951.40 FEET MSL
 14 JUNE 78 1420 HRS MDT
 ASCENSION NO. 66

UPPER AIR DATA
 1650050066
 APACHE
 TABLE XI.

GEODETIC COORDINATES
 32° 62' 00" LAT DEG
 106° 39' 52" LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREE CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES (T) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|-----------------------------------|-------------------|------------------------|----------------------|---------------------------------|-----------------------|---------------------|
| 3951.4 | 882.2 | 35.2 | 6.5 | 17.0 | 992.6 | 685.5 | 90.0 | 8.0 |
| 4000.0 | 880.8 | 33.6 | 5.6 | 17.4 | 996.3 | 683.7 | 91.7 | 7.9 |
| 4500.0 | 865.9 | 30.6 | 5.6 | 20.7 | 989.2 | 680.3 | 111.6 | 7.2 |
| 5000.0 | 851.2 | 29.4 | 6.6 | 23.7 | 975.9 | 679.1 | 132.6 | 7.6 |
| 5500.0 | 836.6 | 27.9 | 6.3 | 25.3 | 963.9 | 677.4 | 149.5 | 8.6 |
| 6000.0 | 822.3 | 26.4 | 5.8 | 26.8 | 952.3 | 675.7 | 161.6 | 10.6 |
| 6500.0 | 808.1 | 24.9 | 5.2 | 28.3 | 940.8 | 673.9 | 167.5 | 12.1 |
| 7000.0 | 794.3 | 23.3 | 4.7 | 29.7 | 929.5 | 672.2 | 168.2 | 12.6 |
| 7500.0 | 780.6 | 21.9 | 4.0 | 31.1 | 918.2 | 670.4 | 168.8 | 13.2 |
| 8000.0 | 767.0 | 20.7 | 3.3 | 31.6 | 905.8 | 669.1 | 168.1 | 12.8 |
| 8500.0 | 753.5 | 19.5 | 2.7 | 32.8 | 893.8 | 667.7 | 167.1 | 12.4 |
| 9000.0 | 740.2 | 18.0 | 2.3 | 34.7 | 882.3 | 666.0 | 166.0 | 11.9 |
| 9500.0 | 727.1 | 16.6 | 1.8 | 36.7 | 871.0 | 664.4 | 164.6 | 10.8 |
| 10000.0 | 714.2 | 15.2 | 1.3 | 38.7 | 859.8 | 662.7 | 162.9 | 9.5 |
| 10500.0 | 701.6 | 13.8 | .7 | 40.7 | 848.9 | 661.1 | 160.6 | 8.3 |
| 11000.0 | 689.0 | 12.3 | .5 | 44.1 | 837.8 | 659.4 | 160.6 | 7.7 |
| 11500.0 | 676.6 | 10.9 | .2 | 47.6 | 827.0 | 657.7 | 162.2 | 7.5 |
| 12000.0 | 664.3 | 9.3 | -.1 | 51.7 | 816.5 | 655.9 | 164.0 | 7.2 |
| 12500.0 | 652.2 | 7.6 | -.4 | 56.8 | 806.6 | 653.9 | 189.0 | 9.0 |
| 13000.0 | 640.3 | 5.8 | -.9 | 62.0 | 796.8 | 651.8 | 207.3 | 12.2 |
| 13500.0 | 628.5 | 4.2 | -.4 | 67.0 | 786.8 | 649.9 | 221.6 | 15.5 |
| 14000.0 | 616.8 | 3.1 | -2.6 | 66.2 | 775.4 | 646.5 | 233.1 | 15.5 |
| 14500.0 | 605.4 | 2.0 | -3.8 | 65.4 | 764.2 | 647.1 | 246.5 | 14.5 |
| 15000.0 | 594.1 | 0.8 | -4.9 | 65.3 | 753.3 | 645.7 | 263.5 | 13.5 |
| 15500.0 | 582.9 | -.4 | -6.0 | 65.9 | 742.7 | 644.2 | 279.6 | 13.6 |
| 16000.0 | 571.9 | -.1 | -7.9 | 62.2 | 732.2 | 642.6 | 287.2 | 13.5 |
| 16500.0 | 561.1 | -2.8 | -10.0 | 57.6 | 721.6 | 641.2 | 290.9 | 13.0 |
| 17000.0 | 550.4 | -3.9 | -12.2 | 52.5 | 710.9 | 639.8 | 289.3 | 11.9 |
| 17500.0 | 539.9 | -5.0 | -14.4 | 47.5 | 700.4 | 636.4 | 287.5 | 11.9 |
| 18000.0 | 529.5 | -6.6 | -15.9 | 47.3 | 691.2 | 636.4 | 286.1 | 12.2 |

STATION ALTITUDE 3951.40 FEET MSL
14 JUNE 78 1420 HRS MDT
ASCENSION NO. 66

UPPER AIR DATA
1650050066
APACHE
TABLE XI. (CONT)

GEOGRAPHIC COORDINATES
32.62700 LAT DEG
106.39352 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEPOINT DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(TN) | SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|-------------------|------------------------|----------------------|---------------------------------|-------------|---------------------|
| 10500.0 | 519.3 | -6.7 | -15.0 | 51.5 | 678.1 | 636.3 | 286.0 | 12.6 |
| 10900.0 | 509.3 | -8.2 | -15.0 | 57.4 | 668.5 | 634.6 | 286.1 | 12.4 |
| 11950.0 | 499.4 | -9.6 | -15.3 | 62.7 | 659.2 | 632.9 | 286.5 | 11.4 |
| 20000.0 | 489.6 | -11.1 | -17.6 | 58.5 | 650.2 | 631.0 | 288.3 | 11.1 |
| 20500.0 | 480.0 | -11.6 | -22.3 | 40.4 | 638.6 | 630.3 | 291.0 | 11.2 |
| 21000.0 | 470.6 | -11.9 | -29.6 | 21.2 | 627.3 | 629.8 | 291.6 | 12.8 |
| 21500.0 | 461.3 | -12.1 | -28.0 | 25.3 | 615.4 | 629.6 | 291.4 | 14.4 |
| 22000.0 | 452.2 | -13.2 | -28.4 | 26.5 | 605.7 | 628.3 | 288.5 | 14.3 |
| 22500.0 | 443.2 | -14.3 | -28.8 | 27.7 | 596.1 | 627.0 | 288.5 | 13.4 |
| 23000.0 | 434.4 | -15.3 | -29.3 | 28.9 | 586.7 | 625.7 | 294.0 | 11.4 |
| 23500.0 | 425.6 | -16.3 | -29.9 | 29.8 | 577.3 | 624.5 | 301.7 | 10.3 |
| 24000.0 | 417.3 | -16.4 | -31.1 | 26.8 | 566.1 | 624.3 | 310.4 | 10.0 |
| 24500.0 | 409.0 | -17.0 | -32.5 | 24.5 | 556.0 | 623.6 | 311.0 | 9.1 |
| 25000.0 | 400.7 | -18.3 | -34.2 | 23.1 | 547.6 | 622.0 | 308.5 | 8.0 |
| 25500.0 | 392.4 | -19.6 | -35.3 | 23.3 | 539.1 | 620.4 | 309.7 | 6.3 |
| 26000.0 | 384.3 | -21.0 | -36.3 | 23.6 | 530.7 | 618.7 | 307.2 | 5.8 |
| 26500.0 | 376.3 | -22.3 | -37.3 | 24.0 | 522.4 | 617.1 | 301.4 | 6.9 |
| 27000.0 | 368.5 | -23.6 | -38.3 | 24.3 | 514.3 | 615.4 | 296.2 | 9.7 |
| 27500.0 | 360.8 | -25.0 | -39.4 | 24.6 | 506.4 | 613.6 | 293.9 | 12.7 |
| 28000.0 | 353.3 | -26.3 | -40.4 | 25.0 | 498.6 | 612.1 | 294.6 | 15.3 |
| 28500.0 | 345.9 | -27.7 | -41.4 | 25.3 | 490.9 | 610.4 | 296.1 | 17.3 |
| 29000.0 | 338.6 | -29.0 | -42.5 | 25.7 | 483.3 | 608.6 | 297.6 | 18.7 |
| 29500.0 | 331.7 | -30.4 | -43.5 | 26.0 | 475.9 | 607.1 | 298.0 | 19.3 |
| 30000.0 | 324.8 | -31.7 | -44.6 | 26.3 | 468.6 | 605.4 | 297.6 | 19.8 |
| 30500.0 | 316.1 | -33.0 | -45.7 | 26.7 | 461.4 | 603.7 | 294.9 | 19.2 |
| 31000.0 | 311.4 | -34.4 | -46.7 | 27.0 | 454.4 | 602.0 | 291.9 | 18.8 |
| 31500.0 | 304.7 | -35.4 | -48.0 | 25.8 | 446.4 | 600.7 | 288.9 | 19.1 |
| 32000.0 | 298.1 | -36.5 | -49.7 | 23.8** | 438.6 | 599.3 | 286.6 | 19.7 |
| 32500.0 | 291.6 | -37.9 | -52.6 | 19.5** | 431.7 | 597.6 | 286.9 | 22.2 |
| 33000.0 | 285.1 | -39.3 | -55.9 | 15.1** | 424.6 | 595.8 | 287.2 | 24.5 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3951.40 FEET MSL
 14 JUNE 78 1420 HRS MDT
 ASCENSION NO. 66

UPPER AIR DATA
 1650050066
 APACHE
 TABLE XI. (CONT)

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES(TN) | SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|-------------------|------------------------|----------------------|---------------------------------|-------------|---------------------|
| 33500.0 | 278.9 | -40.7 | -59.7 | 10.8** | 417.9 | 594.0 | 288.0 | 25.8 |
| 34000.0 | 272.7 | -42.1 | -64.6 | 6.5** | 411.2 | 592.2 | 288.7 | 26.7 |
| 34500.0 | 266.7 | -43.5 | -73.3 | 2.2** | 404.6 | 590.4 | 289.5 | 26.1 |
| 35000.0 | 260.8 | -44.6 | | | 397.6 | 588.9 | 290.2 | 25.7 |
| 35500.0 | 254.9 | -45.5 | | | 390.1 | 587.8 | 290.8 | 25.6 |
| 36000.0 | 249.2 | -46.4 | | | 382.9 | 586.6 | 291.3 | 25.6 |
| 36500.0 | 243.5 | -47.8 | | | 376.5 | 584.8 | 290.6 | 25.5 |
| 37000.0 | 238.0 | -49.2 | | | 370.2 | 583.0 | 289.7 | 25.4 |
| 37500.0 | 232.5 | -49.9 | | | 362.8 | 582.1 | 287.7 | 25.6 |
| 38000.0 | 227.2 | -50.6 | | | 355.6 | 581.2 | 286.2 | 25.9 |
| 38500.0 | 221.9 | -51.5 | | | 348.8 | 580.0 | 286.6 | 26.6 |
| 39000.0 | 216.8 | -52.4 | | | 342.1 | 578.8 | 287.0 | 27.0 |
| 39500.0 | 211.7 | -53.4 | | | 335.6 | 577.6 | 287.1 | 26.8 |
| 40000.0 | 206.8 | -54.3 | | | 329.1 | 576.3 | 286.7 | 26.4 |
| 40500.0 | 202.0 | -55.2 | | | 322.9 | 575.1 | 284.0 | 25.7 |
| 41000.0 | 197.2 | -56.3 | | | 316.8 | 573.7 | 281.2 | 25.0 |
| 41500.0 | 192.4 | -57.6 | | | 310.9 | 572.0 | 279.1 | 24.3 |
| 42000.0 | 187.8 | -58.8 | | | 305.2 | 570.4 | 276.9 | 23.7 |
| 42500.0 | 183.3 | -60.0 | | | 299.5 | 568.7 | 274.9 | 24.0 |
| 43000.0 | 178.8 | -61.3 | | | 294.0 | 567.1 | 273.2 | 24.7 |
| 43500.0 | 174.5 | -62.5 | | | 288.6 | 565.4 | 271.9 | 25.6 |
| 44000.0 | 170.3 | -63.7 | | | 283.3 | 563.8 | 271.7 | 27.3 |
| 44500.0 | 166.2 | -65.0 | | | 278.1 | 562.1 | 271.6 | 29.0 |
| 45000.0 | 162.2 | -66.2 | | | 273.0 | 560.4 | 273.2 | 29.9 |
| 45500.0 | 158.2 | -66.9 | | | 267.2 | 559.5 | 275.7 | 30.5 |
| 46000.0 | 154.3 | -67.5 | | | 261.3 | 558.7 | 278.0 | 30.9 |
| 46500.0 | 150.4 | -68.0 | | | 255.5 | 557.9 | 279.1 | 31.0 |
| 47000.0 | 146.7 | -69.0 | | | 250.3 | 556.7 | 280.2 | 31.1 |
| 47500.0 | 143.0 | -70.0 | | | 245.2 | 555.3 | 281.0 | 28.8 |
| 48000.0 | 139.4 | -70.2 | | | 239.3 | 554.9 | 282.0 | 26.0 |

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3951.40 FEET MSL
 14 JUNE 78 1420 HRS MDT
 ASCENSION 10. 66

UPPER AIR DATA
 1650050066
 APACHE
 TABLE XI. (CONT)

GEODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREE CENTIGRADE | DEWPOINT PERCENT | REL. HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | DIRECTION DEGREES(TN) | SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|-----------------------------------|------------------|-------------------|------------------------|----------------------|-----------------------|-------------|---------------------|
| 48500.0 | 135.9 | -70.4 | | | 233.5 | 554.7 | 282.7 | 22.4 | 1.000052 |
| 49000.0 | 132.5 | -70.6 | | | 227.8 | 554.5 | 283.0 | 17.7 | 1.000051 |
| 49500.0 | 129.1 | -70.5 | | | 222.0 | 554.6 | 283.5 | 13.1 | 1.000049 |
| 50000.0 | 125.9 | -69.7 | | | 215.5 | 555.7 | 272.4 | 10.8 | 1.000048 |
| 50500.0 | 122.7 | -70.1 | | | 210.5 | 555.1 | 256.4 | 9.1 | 1.000047 |
| 51000.0 | 119.6 | -70.9 | | | 205.9 | 554.1 | 243.9 | 8.9 | 1.000046 |
| 51500.0 | 116.6 | -71.6 | | | 201.5 | 553.1 | 239.0 | 9.4 | 1.000045 |
| 52000.0 | 113.6 | -71.7 | | | 196.5 | 552.9 | 234.7 | 10.0 | 1.000044 |
| 52500.0 | 110.7 | -71.7 | | | 191.5 | 553.0 | 233.0 | 10.0 | 1.000043 |
| 53000.0 | 107.9 | -71.6 | | | 186.6 | 553.1 | 231.4 | 9.9 | 1.000042 |
| 53500.0 | 105.2 | -71.5 | | | 181.8 | 553.2 | 227.5 | 9.7 | 1.000040 |
| 54000.0 | 102.5 | -71.6 | | | 177.2 | 553.1 | 220.5 | 9.4 | 1.000039 |
| 54500.0 | 99.9 | -71.8 | | | 172.9 | 552.8 | 213.3 | 9.2 | 1.000039 |
| 55000.0 | 97.4 | -72.2 | | | 168.8 | 552.3 | 208.9 | 9.2 | 1.000038 |
| 55500.0 | 94.9 | -72.6 | | | 164.9 | 551.7 | 204.6 | 9.3 | 1.000037 |
| 56000.0 | 92.5 | -73.0 | | | 161.0 | 551.2 | 201.4 | 9.2 | 1.000036 |
| 56500.0 | 90.2 | -72.7 | | | 156.7 | 551.6 | 198.6 | 9.1 | 1.000035 |
| 57000.0 | 87.9 | -72.0 | | | 152.2 | 552.5 | 195.4 | 8.7 | 1.000034 |
| 57500.0 | 85.7 | -71.4 | | | 148.0 | 553.3 | 190.7 | 8.0 | 1.000033 |
| 58000.0 | 83.5 | -70.8 | | | 143.8 | 554.2 | 185.1 | 7.5 | 1.000032 |
| 58500.0 | 81.4 | -70.2 | | | 139.7 | 555.0 | 181.8 | 7.0 | 1.000031 |
| 59000.0 | 79.4 | -69.6 | | | 135.8 | 555.9 | 179.0 | 6.8 | 1.000030 |
| 59500.0 | 77.4 | -68.9 | | | 132.0 | 556.7 | 170.6 | 6.7 | 1.000029 |
| 60000.0 | 75.4 | -68.3 | | | 128.3 | 557.6 | 155.6 | 7.1 | 1.000029 |
| 60500.0 | 73.5 | -67.7 | | | 124.7 | 558.4 | 142.8 | 8.0 | 1.000028 |
| 61000.0 | 71.7 | -66.7 | | | 121.0 | 559.8 | 128.0 | 10.1 | 1.000027 |
| 61500.0 | 69.9 | -65.2 | | | 117.2 | 561.6 | 118.7 | 12.6 | 1.000026 |
| 62000.0 | 68.2 | -63.5 | | | 113.3 | 564.1 | 115.2 | 14.0 | 1.000025 |
| 62500.0 | 66.6 | -62.3 | | | 110.0 | 565.7 | 113.6 | 14.6 | 1.000024 |
| 63000.0 | 65.0 | -62.0 | | | 107.2 | 566.1 | 112.6 | 15.0 | 1.000024 |

STATION ALTITUDE 3951.40 FEET MSL
 14 JUNE 78 1420 HRS MDT
 ASCENSION NO. 66

UPPER AIR DATA
 1650050066
 APACHE
 TABLE XI. (CONT)

GEOGRAPHIC COORDINATES
 32.62700 LAT DEG
 106.39352 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEWEPOINT DEGREES CENTIGRADE | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | DIRECTION DEGREES (TN) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--|------------------|------------------------|----------------------|------------------------|-----------------------|---------------------|
| 63500.0 | 63.4 | -61.7 | | 104.5 | 566.5 | 112.2 | 15.0 | 1.000023 |
| 64000.0 | 61.9 | -61.4 | | 101.8 | 566.9 | 111.6 | 15.0 | 1.000023 |
| 64500.0 | 60.4 | -61.1 | | 99.2 | 567.3 | 111.7 | 15.2 | 1.000022 |
| 65000.0 | 58.9 | -60.8 | | 96.7 | 567.7 | 111.7 | 15.6 | 1.000022 |
| 65500.0 | 57.5 | -60.5 | | 94.3 | 568.1 | 111.0 | 16.1 | 1.000021 |
| 66000.0 | 56.1 | -60.2 | | 91.9 | 568.5 | 106.8 | 16.8 | 1.000020 |
| 66500.0 | 54.8 | -59.9 | | 89.5 | 568.9 | 103.0 | 17.7 | 1.000020 |
| 67000.0 | 53.5 | -59.6 | | 87.3 | 569.3 | 103.0 | 19.3 | 1.000019 |
| 67500.0 | 52.2 | -59.3 | | 85.0 | 569.7 | 104.7 | 21.3 | 1.000019 |
| 68000.0 | 50.9 | -59.0 | | 82.9 | 570.1 | 105.9 | 23.1 | 1.000018 |
| 68500.0 | 49.7 | -58.7 | | 80.8 | 570.5 | 104.4 | 22.1 | 1.000018 |
| 69000.0 | 48.6 | -58.4 | | 78.8 | 570.9 | 102.8 | 21.2 | 1.000018 |
| 69500.0 | 47.4 | -58.0 | | 76.8 | 571.4 | 99.2 | 20.0 | 1.000017 |
| 70000.0 | 46.3 | -57.7 | | 74.9 | 571.8 | 92.7 | 18.4 | 1.000017 |
| 70500.0 | 45.2 | -57.4 | | 73.0 | 572.3 | 85.2 | 17.1 | 1.000016 |
| 71000.0 | 44.2 | -57.0 | | 71.2 | 572.8 | 85.3 | 17.0 | 1.000016 |
| 71500.0 | 43.1 | -56.7 | | 69.4 | 573.2 | 87.3 | 17.1 | 1.000015 |
| 72000.0 | 42.1 | -56.3 | | 67.7 | 573.7 | 88.9 | 17.2 | 1.000015 |
| 72500.0 | 41.1 | -56.0 | | 66.0 | 574.1 | 88.9 | 17.1 | 1.000015 |
| 73000.0 | 40.2 | -55.6 | | 64.3 | 574.6 | 88.9 | 17.0 | 1.000014 |
| 73500.0 | 39.2 | -55.3 | | 62.7 | 575.0 | 91.7 | 16.8 | 1.000014 |
| 74000.0 | 38.3 | -55.0 | | 61.2 | 575.5 | 97.9 | 16.7 | 1.000014 |
| 74500.0 | 37.4 | -54.6 | | 59.6 | 575.9 | 104.1 | 16.8 | 1.000013 |
| 75000.0 | 36.5 | -54.3 | | 58.2 | 576.4 | 108.9 | 17.2 | 1.000013 |
| 75500.0 | 35.7 | -53.9 | | 56.7 | 576.8 | 112.7 | 17.6 | 1.000013 |
| 76000.0 | 34.9 | -53.6 | | 55.3 | 577.3 | 116.4 | 18.1 | 1.000012 |
| 76500.0 | 34.0 | -53.2 | | 53.9 | 577.7 | 117.1 | 18.7 | 1.000012 |
| 77000.0 | 33.2 | -52.9 | | 52.6 | 578.2 | 117.1 | 19.4 | 1.000012 |
| 77500.0 | 32.5 | -52.6 | | 51.3 | 578.6 | 117.1 | 20.1 | 1.000011 |
| 78000.0 | 31.7 | -52.2 | | 50.0 | 579.1 | 116.8 | 21.4 | 1.000011 |

STATION ALTITUDE 3951.40 FEET MSL
 14 JUNE 78 1420 HRS MDT
 ASCENSION NO. 66

UPPER AIR DATA
 1650050066
 APACHE
 TABLE XI. (CONT)

GEOGRAPHIC COORDINATES
 32.62700 LAT DEG
 106.39352 LON DEG

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREEES | DEWPOINT DEGREEES | REL.HUM. PERCENT | DENSITY METER | SPEED OF SOUND KNOTS | DIRECTION DEGREES(TN) | WIND DATA SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|--------------------------|-------------------|------------------|---------------|----------------------|-----------------------|-----------------------|---------------------|
| 78500.0 | 31.0 | -51.9 | | | 48.7 | 579.5 | 116.5 | 22.7 | 1.000011 |
| 79000.0 | 30.2 | -51.1 | | | 47.4 | 580.5 | 115.9 | 23.7 | 1.000011 |
| 79500.0 | 29.5 | -50.7 | | | 46.3 | 581.0 | 113.1 | 23.0 | 1.000010 |
| 80000.0 | 28.9 | -50.8 | | | 45.2 | 580.9 | 110.1 | 22.3 | 1.000010 |
| 80500.0 | 28.2 | -50.9 | | | 44.2 | 580.8 | 107.1 | 21.5 | 1.000010 |
| 81000.0 | 27.6 | -50.9 | | | 43.2 | 580.8 | 104.1 | 20.5 | 1.000010 |
| 81500.0 | 26.9 | -51.0 | | | 42.2 | 580.7 | 100.7 | 19.5 | 1.000009 |
| 82000.0 | 26.3 | -51.0 | | | 41.3 | 580.6 | 99.6 | 19.3 | 1.000009 |
| 82500.0 | 25.7 | -51.1 | | | 40.3 | 580.5 | 101.0 | 20.0 | 1.000009 |
| 83000.0 | 25.1 | -50.8 | | | 39.4 | 580.9 | 102.3 | 20.7 | 1.000009 |
| 83500.0 | 24.5 | -50.5 | | | 38.4 | 581.4 | 98.7 | 21.8 | 1.000009 |
| 84000.0 | 24.0 | -50.1 | | | 37.5 | 581.8 | 93.7 | 23.2 | 1.000008 |
| 84500.0 | 23.4 | -49.7 | | | 36.5 | 582.3 | 89.3 | 24.6 | 1.000008 |
| 85000.0 | 22.9 | -49.4 | | | 35.7 | 582.8 | 89.0 | 26.6 | 1.000008 |
| 85500.0 | 22.4 | -49.0 | | | 34.8 | 583.2 | 89.0 | 28.4 | 1.000008 |
| 86000.0 | 21.9 | -48.7 | | | 33.9 | 583.7 | 89.6 | 29.8 | 1.000008 |
| 86500.0 | 21.4 | -48.3 | | | 33.1 | 584.1 | 94.9 | 28.6 | 1.000007 |
| 87000.0 | 20.9 | -48.0 | | | 32.3 | 584.6 | 100.6 | 27.6 | 1.000007 |
| 87500.0 | 20.4 | -47.6 | | | 31.5 | 585.1 | 104.9 | 26.6 | 1.000007 |
| 88000.0 | 20.0 | -47.3 | | | 30.8 | 585.5 | 105.5 | 25.0 | 1.000007 |
| 88500.0 | 19.5 | -47.0 | | | 30.0 | 585.8 | 106.3 | 23.3 | 1.000007 |
| 89000.0 | 19.1 | -46.8 | | | 29.3 | 586.1 | 105.7 | 22.2 | 1.000007 |
| 89500.0 | 18.6 | -46.5 | | | 28.7 | 586.5 | 103.5 | 21.6 | 1.000006 |
| 90000.0 | 18.2 | -46.3 | | | 28.0 | 586.8 | 101.1 | 21.1 | 1.000006 |
| 90500.0 | 17.8 | -46.0 | | | 27.3 | 587.1 | 99.0 | 20.4 | 1.000006 |
| 91000.0 | 17.4 | -45.8 | | | 26.7 | 587.4 | 96.9 | 19.7 | 1.000006 |
| 91500.0 | 17.0 | -45.6 | | | 26.1 | 587.7 | 94.6 | 19.1 | 1.000006 |
| 92000.0 | 16.6 | -45.3 | | | 25.4 | 588.0 | 93.9 | 18.3 | 1.000006 |
| 92500.0 | 16.3 | -45.1 | | | 24.8 | 588.4 | 93.4 | 17.4 | 1.000006 |
| 93000.0 | 15.9 | -44.8 | | | 24.3 | 588.7 | 92.9 | 16.5 | 1.000005 |

STATION ALTITUDE 3951.40 FEET MSL
14 JUNE 78 1420 HRS MDT
ASCENSION NO. 66

UPPER AIR DATA
1650050060
APACHE
TABLE XI. (CONT)

| GEOMETRIC ALTITUDE MSL FEET | PRESSURE MILLIBARS | TEMPERATURE AIR DEGREE CENTIGRADE | DEWPOINT DEGREES | REL.HUM. PERCENT | DENSITY GM/CUBIC METER | SPEED OF SOUND KNOTS | WIND DATA DIRECTION DEGREES (TN) | SPEED KNOTS | INDEX OF REFRACTION |
|-----------------------------|--------------------|-----------------------------------|------------------|------------------|------------------------|----------------------|----------------------------------|-------------|---------------------|
| 93500.0 | 15.5 | -44.6 | | | 23.7 | 589.0 | 92.0 | 15.2 | 1.000005 |
| 94000.0 | 15.2 | -44.3 | | | 23.1 | 589.4 | 90.8 | 14.0 | 1.000005 |
| 94500.0 | 14.9 | -43.9 | | | 22.6 | 589.8 | 89.0 | 12.9 | 1.000005 |
| 95000.0 | 14.5 | -43.6 | | | 22.1 | 590.3 | 84.2 | 14.4 | 1.000005 |
| 95500.0 | 14.2 | -43.2 | | | 21.5 | 590.8 | 80.3 | 15.9 | 1.000005 |
| 96000.0 | 13.9 | -42.8 | | | 21.0 | 591.2 | 77.1 | 17.5 | 1.000005 |
| 96500.0 | 13.6 | -42.5 | | | 20.5 | 591.7 | | | 1.000005 |
| 97000.0 | 13.3 | -42.1 | | | 20.0 | 592.2 | | | 1.000004 |
| 97500.0 | 13.0 | -41.7 | | | 19.6 | 592.6 | | | 1.000004 |
| 98000.0 | 12.7 | -41.4 | | | 19.1 | 593.1 | | | 1.000004 |
| 98500.0 | 12.4 | -41.0 | | | 18.7 | 593.6 | | | 1.000004 |

STATION ALTITUDE 3951.40 FEET MSL
 14 JUNE 78 1420 HRS MDT
 ASCENSION NO. 66

MANDATORY LEVELS
 1650050066
 APACHE
 TABLE XIII.

GEODETIC COORDINATES
 32.62700 LAT DEG
 106.39352 LON DEG

| PRESSURE MILLIBARS | GEOPOTENTIAL FEET | AIR DEGREES | TEMPERATURE CENTIGRADE | REL.HUM. PERCENT | WIND DATA | |
|-----------------------|----------------------|----------------|---------------------------|---------------------|--------------------------|----------------|
| | | | | | DIRECTION DEGREES(TN) | SPEED KNOTS |
| 850.0 | 5039. | 29.3 | 6.7 | 24. | 134.1 | 7.7 |
| 800.0 | 6793. | 24.0 | 4.9 | 29. | 167.9 | 12.4 |
| 750.0 | 8627. | 19.1 | 2.6 | 33. | 166.8 | 12.2 |
| 700.0 | 10553. | 13.6 | 0.6 | 41. | 160.3 | 8.1 |
| 650.0 | 12581. | 7.3 | -0.5 | 58. | 192.8 | 9.6 |
| 600.0 | 14720. | 1.5 | -4.4 | 65. | 253.8 | 13.9 |
| 550.0 | 16998. | -3.9 | -12.2 | 52. | 289.2 | 11.8 |
| 500.0 | 19442. | -9.5 | -15.2 | 63. | 286.4 | 11.5 |
| 450.0 | 22092. | -13.5 | -28.5 | 27. | 287.8 | 14.2 |
| 400.0 | 25004. | -18.4 | -34.3 | 23. | 308.6 | 7.9 |
| 350.0 | 28219. | -26.9 | -40.9 | 25. | 295.2 | 16.7 |
| 300.0 | 31745. | -36.1 | -48.9 | 25. | 287.0 | 19.2 |
| 250.0 | 35852. | -46.2 | -46.2 | 291.3 | 25.6 | |
| 200.0 | 40610. | -55.6 | -55.6 | 283.0 | 25.4 | |
| 175.0 | 43359. | -62.4 | -62.4 | 271.9 | 25.5 | |
| 150.0 | 46431. | -68.1 | -68.1 | 279.2 | 31.0 | |
| 125.0 | 49991. | -69.5 | -69.5 | 269.3 | 10.4 | |
| 100.0 | 54319. | -71.8 | -71.8 | 213.7 | 9.2 | |
| 80.0 | 58636. | -69.8 | -69.8 | 180.1 | 6.9 | |
| 70.0 | 61269. | -65.3 | -65.3 | 119.5 | 12.4 | |
| 60.0 | 64393. | -61.0 | -61.0 | 111.7 | 15.3 | |
| 50.0 | 68129. | -58.8 | -58.8 | 104.9 | 22.4 | |
| 40.0 | 72760. | -55.6 | -55.6 | 88.9 | 17.0 | |
| 30.0 | 78833. | -50.7 | -50.7 | 115.2 | 23.5 | |
| 25.0 | 82727. | -50.7 | -50.7 | 102.4 | 20.8 | |
| 20.0 | 87534. | -47.3 | -47.3 | 105.4 | 25.3 | |
| 15.0 | 93821. | -44.1 | -44.1 | 90.1 | 13.5 | |